

**JONES & LAUGHLIN  
STEEL COMPANY  
PITTSBURGH  
LIST OF SHAPES  
1910**

**BRANCH OFFICE AND WAREHOUSE,  
CHICAGO**

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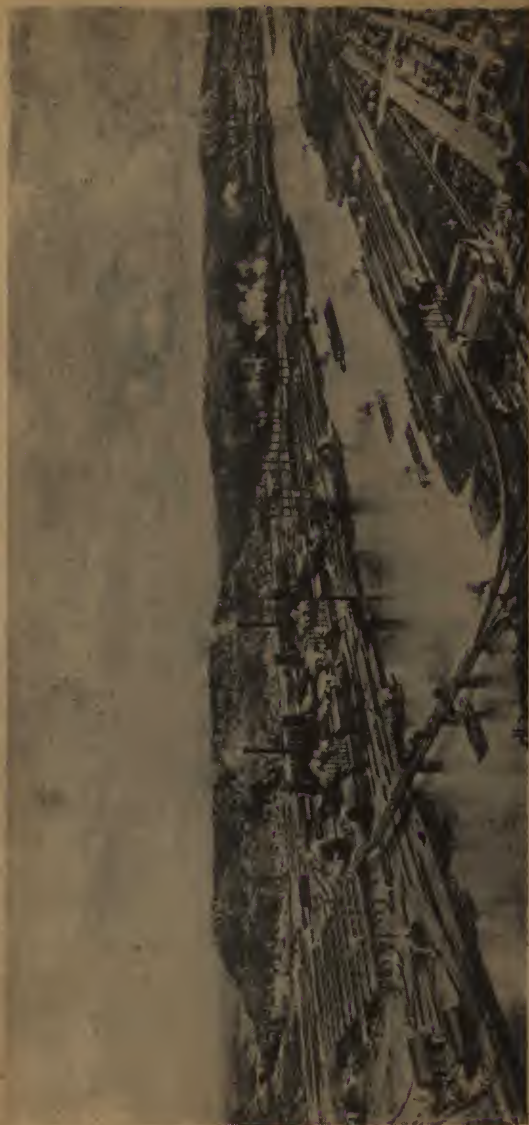
**Alan O'Bright**





General Offices





**Eliza Furnaces and Coke Ovens**



South Side Works

# **JONES & LAUGHLIN STEEL COMPANY**

**AMERICAN IRON & STEEL WORKS**

**MANUFACTURERS OF  
BESSEMER AND OPEN HEARTH  
STEEL  
PRODUCTS**



**1910  
GENERAL OFFICES  
PITTSBURGH**

# **OFFICES**

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**GENERAL OFFICES: PITTSBURGH**

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**BRANCH OFFICE AND WAREHOUSE  
CHICAGO**

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## **SALES OFFICES**

**ATLANTA**  
FOURTH NATIONAL BANK BUILDING

**BOSTON**  
131 STATE STREET

**BUFFALO**  
WHITE BUILDING

**CINCINNATI**  
UNION TRUST COMPANY BUILDING

**CLEVELAND**  
ROCKEFELLER BUILDING

**DETROIT**  
F. A. GOODRICH & COMPANY  
PENOBSCOT BUILDING

**NEW YORK**  
220 BROADWAY

**PHILADELPHIA**  
ARCADE BUILDING

**SAN FRANCISCO**  
CROCKER BUILDING

**ST. LOUIS**  
F. A. GOODRICH IRON & STEEL COMPANY  
CHEMICAL BUILDING

## **LIST OF WORKS**

---

**ELIZA FURNACES  
AND  
COKE OVENS**

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**SOUTH SIDE WORKS**

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**SOHO FURNACE  
AND  
WORKS**

---

**KEYSTONE WORKS**  
(Structural Department)

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**ALIQUIPPA WORKS**

## PRODUCTS

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BLOOMS

SLABS

BILLETS

SHEET BARS

SKELP

PLATES

BEAMS

CHANNELS

ANGLES

TEES

ZEES

SHEET PILING

ROUNDS

SQUARES

HEXAGONS

FLATS

OVALS

HOOPS

BANDS

SPECIAL SHAPES

AGRICULTURAL SHAPES

## STRUCTURAL WORK

COLUMNS

GIRDERS

TRUSSES

PLATE WORK



## **PRODUCTS**

COLD-TWISTED SQUARE CONCRETE BARS  
CHAINS

LIGHT RAILS AND CONNECTIONS  
STEEL MINE TIES

RAILROAD SPIKES      BOAT SPIKES  
RIVETS

### **COLD ROLLED**

SHAFTING      AXLES      SHAPES  
FINGER BARS

### **COLD DRAWN**

HEXAGONS      FLATS  
SQUARES AND ROUNDS

### **FORGINGS**

WE HAVE A SPECIAL CATALOGUE OF  
**POWER TRANSMISSION  
MACHINERY**

INCLUDING

COLD ROLLED STEEL COUPLINGS  
BEARINGS PULLEYS  
ROPE SHEAVES MULE STANDS

BELT TIGHTENERS BINDER FRAMES  
GUIDE PULLEYS  
FRICTION CLUTCH PULLEYS  
FRICTION CLUTCH COUPLINGS

COLD ROLLED STEEL PUMP AND PISTON  
RODS, SQUARES, HEXAGONS, FLATS AND MIS-  
CELLANEOUS SHAPES, COLD ROLLED AXLES FOR  
ELECTRIC STREET RAILWAY USE, AND SPECIAL  
SCREW STEEL FOR AUTOMATIC MACHINES

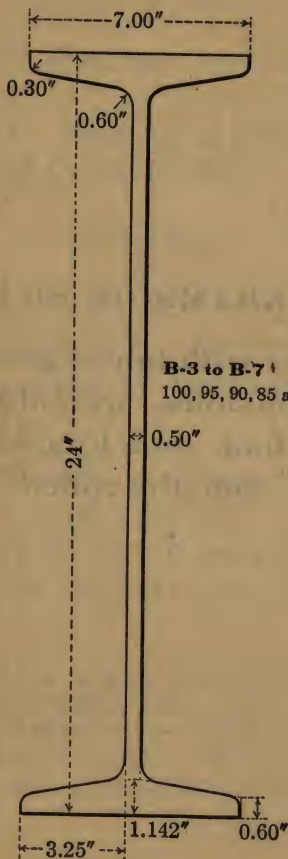




## DIAGRAMS OF SHAPES

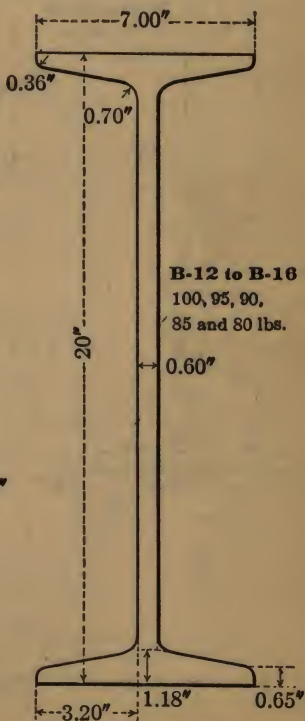
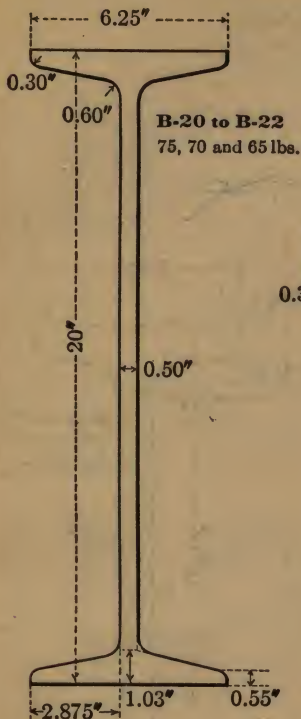
Together with tables giving their  
dimensions, weights per  
foot, and longest  
lengths rolled

## BEAMS



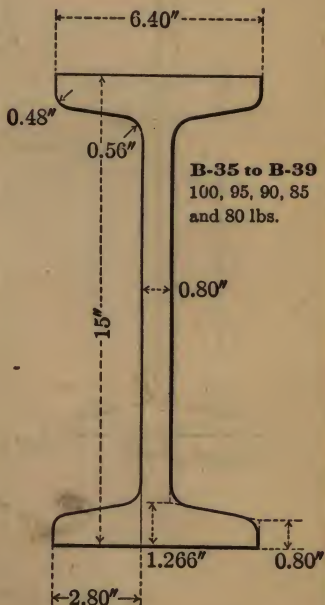
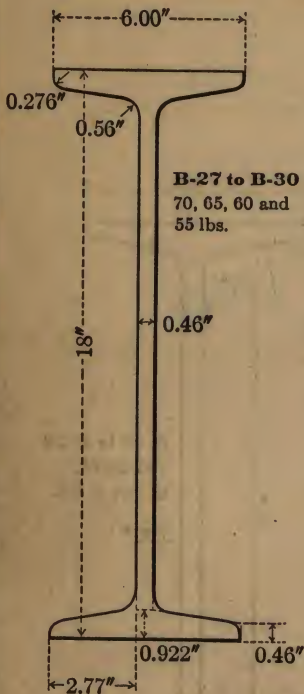
NOTE.—For weights and dimensions see pages 17 and 18.

## BEAMS



NOTE.—For weights and dimensions see pages 17 and 18.

## BEAMS

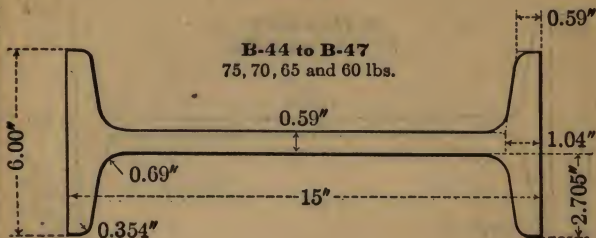


NOTE.—For weights and dimensions see pages 17 and 18.

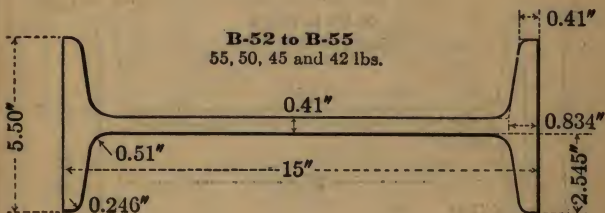
## BEAMS

**B-44 to B-47**

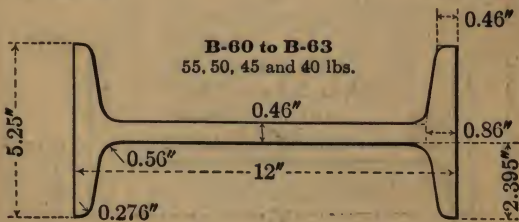
75, 70, 65 and 60 lbs.

**B-52 to B-55**

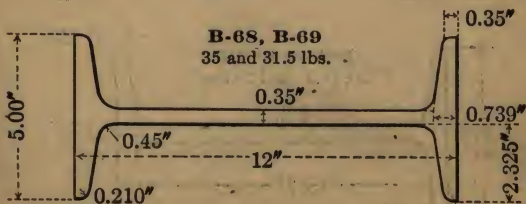
55, 50, 45 and 42 lbs.

**B-60 to B-63**

55, 50, 45 and 40 lbs.

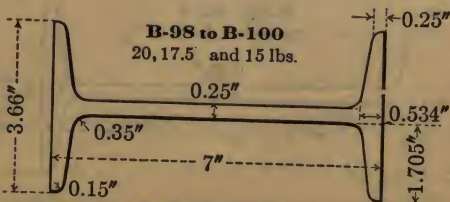
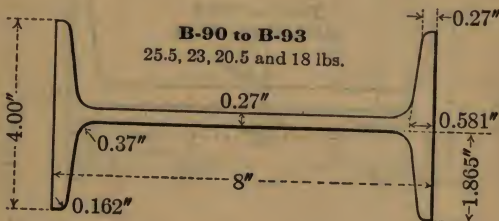
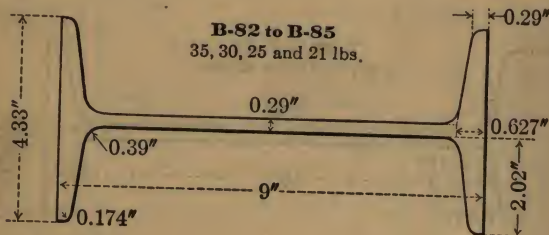
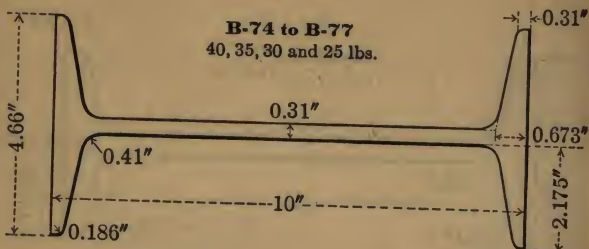
**B-68, B-69**

35 and 31.5 lbs.



NOTE.—For weights and dimensions see pages 17 and 18.

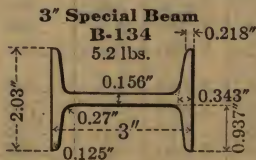
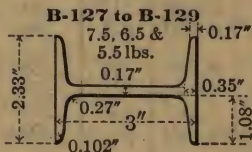
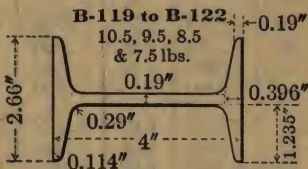
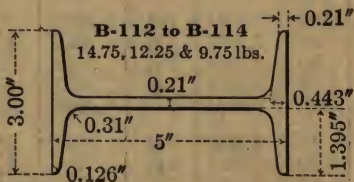
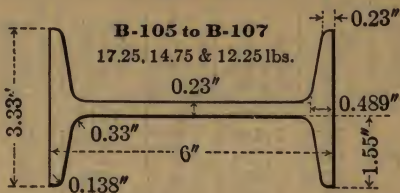
## BEAMS



NOTE.—For weights and dimensions see pages 17 and 18.



## BEAMS



NOTE.—For weights and dimensions see pages 17 and 18.

## BEAMS

Section Index	Depth of Beam, Inches	Weight per Foot, Pounds	FLANGE WIDTH		WEB THICKNESS		Maximum Length, Feet
			Inches and Decimal Parts	Inches and Fractional Parts	Decimal Parts of an Inch	Fractional Parts of an Inch	
B-3	24	100	7.248	7 $\frac{1}{4}$	.748	$\frac{3}{4}$	57
B-4		95	7.186	7 $\frac{3}{16}$	.686	$\frac{1}{2}$	60
B-5		90	7.124	7 $\frac{1}{8}$	.624	$\frac{3}{8}$	62
B-6		85	7.062	7 $\frac{1}{16}$	.562	$\frac{9}{16}$	65
B-7		80	7.000	7	.500	$\frac{1}{2}$	69
B-12	20	100	7.300	7 $\frac{19}{64}$	.900	$\frac{29}{32}$	45
B-13		95	7.225	7 $\frac{7}{32}$	.825	$\frac{53}{64}$	47
B-14		90	7.150	7 $\frac{5}{32}$	.750	$\frac{3}{4}$	50
B-15		85	7.075	7 $\frac{5}{64}$	.675	$\frac{43}{64}$	50
B-16		80	7.000	7	.600	$\frac{39}{64}$	53
B-20	20	75	6.400	6 $\frac{13}{32}$	.650	$\frac{21}{32}$	56
B-21		70	6.325	6 $\frac{21}{64}$	.575	$\frac{23}{64}$	60
B-22		65	6.250	6 $\frac{1}{4}$	.500	$\frac{1}{2}$	64
B-27	18	70	6.249	6 $\frac{1}{4}$	.709	$\frac{45}{64}$	60
B-28		65	6.166	6 $\frac{11}{64}$	.626	$\frac{5}{8}$	63
B-29		60	6.083	6 $\frac{3}{32}$	.543	$\frac{35}{64}$	65
B-30		55	6.000	6	.460	$\frac{15}{32}$	70
B-35	15	100	6.792	6 $\frac{51}{64}$	1.192	1 $\frac{3}{16}$	43
B-36		95	6.694	6 $\frac{11}{16}$	1.094	1 $\frac{3}{32}$	45
B-37		90	6.596	6 $\frac{19}{32}$	.996	1	48
B-38		85	6.498	6 $\frac{1}{2}$	.898	$\frac{29}{32}$	51
B-39		80	6.400	6 $\frac{13}{32}$	.800	$\frac{51}{64}$	55
B-44	15	75	6.294	6 $\frac{19}{64}$	.884	$\frac{57}{64}$	56
B-45		70	6.196	6 $\frac{13}{64}$	.786	$\frac{25}{32}$	60
B-46		65	6.098	6 $\frac{3}{32}$	.688	$\frac{11}{16}$	64
B-47		60	6.000	6	.590	$\frac{19}{32}$	70
B-52	15	55	5.754	5 $\frac{3}{4}$	.664	$\frac{43}{64}$	75
B-53		50	5.656	5 $\frac{21}{32}$	.566	$\frac{9}{16}$	75
B-54		45	5.558	5 $\frac{19}{16}$	.468	$\frac{15}{32}$	75
B-55		42	5.500	5 $\frac{1}{2}$	.410	$\frac{13}{32}$	75
B-60	12	55	5.618	5 $\frac{5}{8}$	.828	$\frac{53}{64}$	60
B-61		50	5.496	5 $\frac{1}{2}$	.706	$\frac{45}{64}$	65
B-62		45	5.373	5 $\frac{3}{8}$	.583	$\frac{37}{64}$	70
B-63		40	5.250	5 $\frac{1}{4}$	.460	$\frac{15}{32}$	75

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.



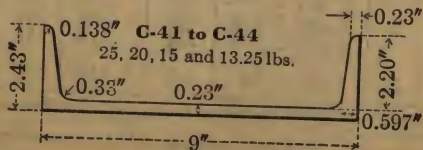
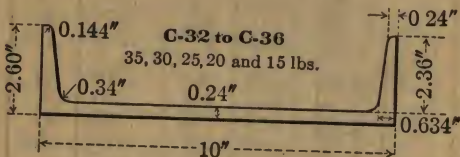
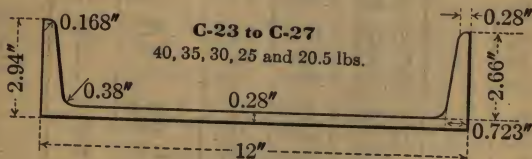
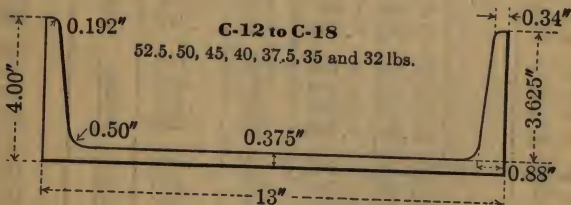
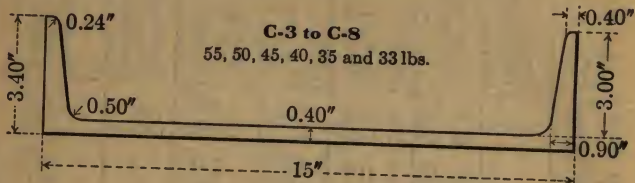
## BEAMS

Section Index	Depth of Beam, Inches	Weight per Foot, Pounds	FLANGE WIDTH		WEB THICKNESS		Maximum Length, Feet
			Inches and Decimal Parts	Inches and Fractional Parts	Decimal Parts of an Inch	Fractional Parts of an Inch	
B- 68	12	35.00	5.085	5 $\frac{5}{64}$	.436	$\frac{7}{16}$	75
B- 69		31.50	5.000	5	.350	$\frac{23}{64}$	80
B- 74	10	40.00	5.101	5 $\frac{3}{32}$	.751	$\frac{3}{4}$	80
B- 75		35.00	4.954	4 $\frac{61}{64}$	.604	$\frac{39}{64}$	90
B- 76		30.00	4.807	4 $\frac{13}{16}$	.457	$\frac{29}{64}$	100
B- 77		25.00	4.660	4 $\frac{3}{8}$	.310	$\frac{5}{16}$	100
B- 82	9	35.00	4.787	4 $\frac{25}{32}$	.747	$\frac{3}{4}$	90
B- 83		30.00	4.624	4 $\frac{8}{16}$	.584	$\frac{37}{64}$	100
B- 84		25.00	4.461	4 $\frac{5}{32}$	.421	$\frac{27}{64}$	100
B- 85		21.00	4.330	4 $\frac{21}{64}$	.290	$\frac{19}{64}$	100
B- 90	8	25.50	4.276	4 $\frac{9}{32}$	.546	$\frac{35}{64}$	90
B- 91		23.00	4.184	4 $\frac{3}{16}$	.454	$\frac{29}{64}$	100
B- 92		20.50	4.092	4 $\frac{3}{32}$	.362	$\frac{23}{64}$	100
B- 93		18.00	4.000	4	.270	$\frac{17}{64}$	100
B- 98	7	20.00	3.872	3 $\frac{7}{8}$	.462	$\frac{15}{32}$	90
B- 99		17.50	3.766	3 $\frac{49}{64}$	.356	$\frac{23}{64}$	100
B-100		15.00	3.660	3 $\frac{21}{32}$	.250	$\frac{1}{4}$	100
B-105	6	17.25	3.575	3 $\frac{37}{64}$	.475	$\frac{15}{32}$	90
B-106		14.75	3.453	3 $\frac{29}{64}$	.353	$\frac{23}{64}$	100
B-107		12.25	3.330	3 $\frac{21}{64}$	.230	$\frac{15}{64}$	100
B-112	5	14.75	3.294	3 $\frac{19}{64}$	.504	$\frac{1}{2}$	90
B-113		12.25	3.147	3 $\frac{9}{64}$	.357	$\frac{23}{64}$	100
B-114		9.75	3.000	3	.210	$\frac{13}{64}$	100
B-119	4	10.50	2.880	2 $\frac{7}{8}$	.410	$\frac{13}{32}$	50
B-120		9.50	2.806	2 $\frac{13}{16}$	.366	$\frac{23}{64}$	55
B-121		8.50	2.733	2 $\frac{47}{64}$	.263	$\frac{17}{64}$	65
B-122		7.50	2.660	2 $\frac{43}{64}$	.190	$\frac{3}{16}$	65
B-127	3	7.50	2.526	2 $\frac{17}{32}$	.366	$\frac{23}{64}$	33
B-128		6.50	2.428	2 $\frac{27}{64}$	.268	$\frac{17}{64}$	38
B-129		5.50	2.330	2 $\frac{21}{64}$	.170	$\frac{11}{64}$	45
B-134	3	5.20	2.03	2 $\frac{1}{32}$	.156	$\frac{5}{32}$	47

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

NOTE.—Lengths over 75 feet are made only by special arrangement.

## CHANNELS



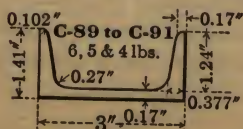
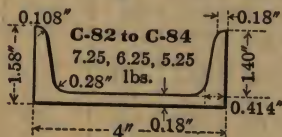
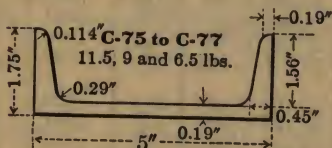
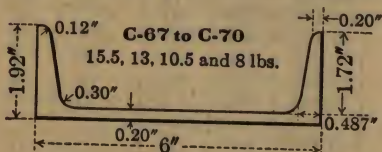
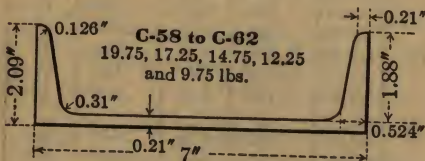
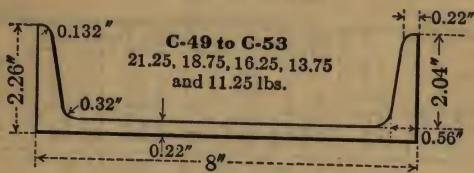
## CHANNELS

Section Index	Depth of Channel, Inches	Weight per Foot, Pounds	FLANGE WIDTH		WEB THICKNESS		Maximum Length, Feet
			Inches and Decimal Parts	Inches and Fractional Parts	Decimal Parts of an Inch	Fractional Parts of an Inch	
C-3	15	55.00	3.832	3 $\frac{53}{64}$	.832	$\frac{53}{64}$	65
C-4		50.00	3.734	3 $\frac{47}{64}$	.734	$\frac{47}{64}$	72
C-5		45.00	3.636	3 $\frac{41}{64}$	.636	$\frac{41}{64}$	75
C-6		40.00	3.538	3 $\frac{35}{64}$	.538	$\frac{35}{64}$	90
C-7		35.00	3.440	3 $\frac{29}{64}$	.440	$\frac{29}{64}$	90
C-8		33.00	3.400	3 $\frac{23}{32}$	.400	$\frac{13}{32}$	90
C-12	13	52.50	4.465	4 $\frac{15}{32}$	.840	$\frac{27}{32}$	50
C-13		50.00	4.414	4 $\frac{27}{64}$	.789	$\frac{51}{64}$	50
C-14		45.00	4.299	4 $\frac{19}{64}$	.674	$\frac{43}{64}$	60
C-15		40.00	4.184	4 $\frac{3}{16}$	.559	$\frac{9}{16}$	65
C-16		37.50	4.125	4 $\frac{1}{8}$	.500	$\frac{1}{2}$	65
C-17		35.00	4.046	4 $\frac{3}{64}$	.421	$\frac{27}{64}$	75
C-18		32.00	4.000	4	.375	$\frac{3}{8}$	75
C-23	12	40.00	3.418	3 $\frac{27}{64}$	.758	$\frac{49}{64}$	65
C-24		35.00	3.296	3 $\frac{19}{64}$	.636	$\frac{41}{64}$	75
C-25		30.00	3.173	3 $\frac{11}{64}$	.513	$\frac{33}{64}$	80
C-26		25.00	3.050	3 $\frac{3}{64}$	.390	$\frac{25}{64}$	80
C-27		20.50	2.940	3 $\frac{15}{16}$	.280	$\frac{9}{32}$	80
C-32	10	35.00	3.188	3 $\frac{3}{16}$	.828	$\frac{53}{64}$	75
C-33		30.00	3.041	3 $\frac{3}{64}$	.681	$\frac{11}{16}$	85
C-34		25.00	2.894	2 $\frac{27}{64}$	.534	$\frac{17}{32}$	100
C-35		20.00	2.747	2 $\frac{3}{4}$	.387	$\frac{25}{64}$	100
C-36		15.00	2.600	2 $\frac{39}{64}$	.240	$\frac{15}{64}$	100
C-41	9	25.00	2.814	2 $\frac{13}{16}$	.614	$\frac{39}{64}$	75
C-42		20.00	2.651	2 $\frac{21}{64}$	.451	$\frac{29}{64}$	85
C-43		15.00	2.488	2 $\frac{31}{64}$	.288	$\frac{9}{32}$	100
C-44		13.25	2.430	2 $\frac{7}{16}$	.230	$\frac{15}{64}$	100

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

NOTE.—Lengths over 75 feet are made only by special arrangement.

## CHANNELS





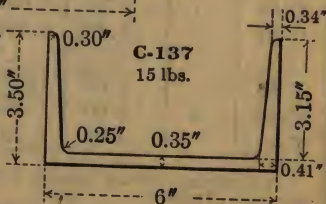
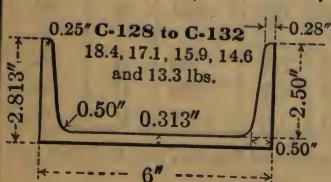
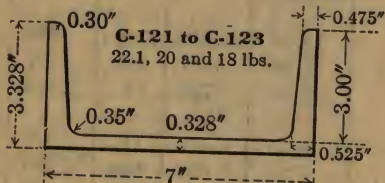
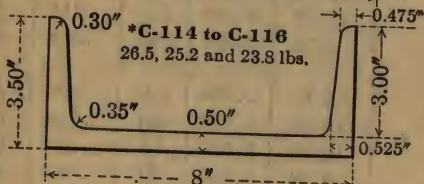
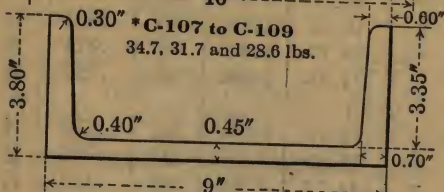
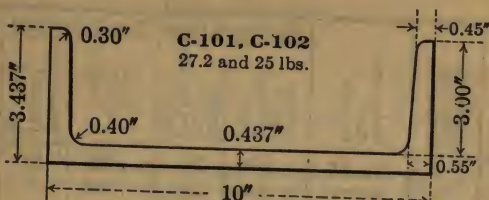
## CHANNELS

Section Index	Depth of Channel, Inches	Weight per Foot, Pounds	FLANGE WIDTH		WEB THICKNESS		Maximum Length, Feet
			Inches and Decimal Parts	Inches and Fractional Parts	Decimal Parts of an Inch	Fractional Parts of an Inch	
C-49	8	21.25	2.628	2 $\frac{1}{8}$	.588	$\frac{19}{32}$	90
C-50		18.75	2.536	2 $\frac{17}{32}$	.496	$\frac{1}{2}$	100
C-51		16.25	2.444	2 $\frac{7}{16}$	.404	$\frac{13}{32}$	100
C-52		13.75	2.352	2 $\frac{23}{64}$	.312	$\frac{5}{16}$	100
C-53		11.25	2.260	2 $\frac{17}{64}$	.220	$\frac{7}{32}$	100
C-58	7	19.75	2.510	2 $\frac{33}{64}$	.630	$\frac{5}{8}$	100
C-59		17.25	2.405	2 $\frac{13}{32}$	.525	$\frac{17}{32}$	100
C-60		14.75	2.300	2 $\frac{19}{64}$	.420	$\frac{27}{64}$	100
C-61		12.25	2.195	2 $\frac{3}{16}$	.315	$\frac{5}{16}$	100
C-62		9.75	2.090	2 $\frac{3}{32}$	.210	$\frac{7}{32}$	100
C-67	6	15.50	2.288	2 $\frac{9}{32}$	.568	$\frac{9}{16}$	90
C-68		13.00	2.166	2 $\frac{11}{64}$	.446	$\frac{29}{64}$	100
C-69		10.50	2.043	2 $\frac{3}{64}$	.323	$\frac{21}{64}$	100
C-70		8.00	1.920	1 $\frac{59}{64}$	.200	$\frac{13}{64}$	100
C-75	5	11.50	2.044	2 $\frac{3}{64}$	.484	$\frac{31}{64}$	100
C-76		9.00	1.897	1 $\frac{57}{64}$	.337	$\frac{11}{32}$	100
C-77		6.50	1.750	1 $\frac{1}{2}$	.190	$\frac{3}{16}$	100
C-82	4	7.25	1.727	1 $\frac{47}{64}$	.327	$\frac{21}{64}$	60
C-83		6.25	1.654	1 $\frac{31}{32}$	.254	$\frac{1}{2}$	65
C-84		5.25	1.580	1 $\frac{27}{64}$	.180	$\frac{3}{16}$	65
C-89	3	6.00	1.606	1 $\frac{39}{64}$	.366	$\frac{23}{64}$	42
C-90		5.00	1.508	1 $\frac{33}{64}$	.268	$\frac{17}{64}$	50
C-91		4.00	1.410	1 $\frac{13}{32}$	.170	$\frac{11}{64}$	50

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

NOTE.—Lengths over 75 feet are made only by special arrangement.

## SHIP CHANNELS



\* Proposed sections; inserted for reference only.

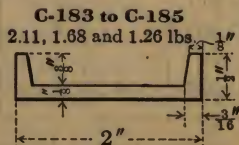
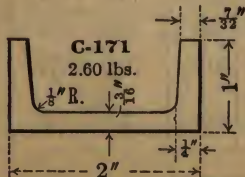
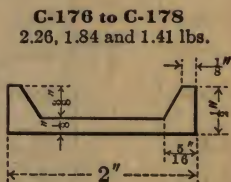
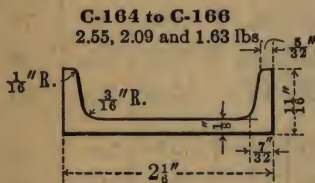
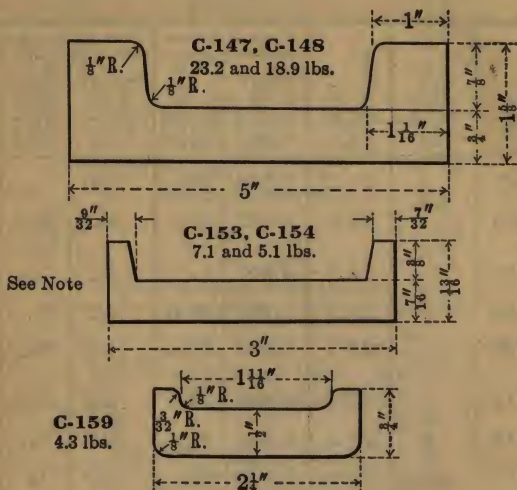
## SHIP CHANNELS

Section Index	Depth of Channel, Inches	Weight per Foot, Pounds	FLANGE WIDTH		WEB THICKNESS		Maximum Length, Feet
			Inches and Decimal Parts	Inches and Fractional Parts	Decimal Parts of an Inch	Fractional Parts of an Inch	
C-101	10	27.2	3.500	3½	.500	½	80
C-102		25.0	3.437	3⅞	.437	⅞	85
*C-107	9	34.7	4.002	4	.652	2⅓	85
*C-108		31.7	3.902	3⅔	.552	⅞	85
*C-109		28.6	3.800	3⅓	.450	2¼	85
*C-114	8	26.5	3.602	3⅝	.602	3¼	85
*C-115		25.2	3.552	3⅞	.552	⅞	85
*C-116		23.8	3.500	3½	.500	½	85
C-121	7	22.1	3.500	3½	.500	½	75
C-122		20.0	3.412	3⅞	.412	1⅓	85
C-123		18.0	3.328	3⅔	.328	2¼	95
C-128	6	18.4	3.063	3⅞	.563	⅞	30
C-129		17.1	3.000	3	.500	½	30
C-130		15.9	2.936	2⅝	.437	⅞	35
C-131		14.6	2.874	2⅞	.375	¾	35
C-132		13.3	2.813	2⅓	.313	5⅞	40
C-137		15.0	3.500	3½	.350	1⅓	100

\*Proposed sections; inserted for reference only.

NOTE.— Lengths over 75 feet are made only by special arrangement.

## SPECIAL CHANNELS



NOTE.—C-153 and C-154 made only by special arrangement.



## SPECIAL CHANNELS

Section Index	Size of Section, Inches	Width of Flange, Inches	Thickness of Web, Inches	Weight per Foot, Pounds
C-147	5	$1\frac{7}{8}$	1	23.2
C-148	5	$1\frac{5}{8}$	$\frac{3}{4}$	18.9
*C-153	3	1	$\frac{5}{8}$	7.1
*C-154	3	$1\frac{3}{16}$	$\frac{7}{16}$	5.1
C-159	$2\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	4.3
C-164	$2\frac{1}{6}$	$1\frac{3}{16}$	$\frac{1}{4}$	2.55
C-165	$2\frac{1}{6}$	$\frac{3}{4}$	$\frac{3}{16}$	2.09
C-166	$2\frac{1}{6}$	$1\frac{1}{16}$	$\frac{1}{8}$	1.63
C-171	2	1	$\frac{3}{16}$	2.60
C-176	2	$\frac{5}{8}$	$\frac{1}{4}$	2.26
C-177	2	$\frac{9}{16}$	$\frac{3}{16}$	1.84
C-178	2	$\frac{1}{2}$	$\frac{1}{8}$	1.41
C-183	2	$\frac{5}{8}$	$\frac{1}{4}$	2.11
C-184	2	$\frac{9}{16}$	$\frac{3}{16}$	1.68
C-185	2	$\frac{1}{2}$	$\frac{1}{8}$	1.26

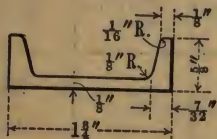
\*NOTE. — C-153 and C-154 made only by special arrangement.

## SPECIAL CHANNELS

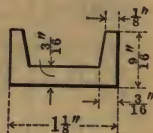
**C-190****C-191**

1.71 and

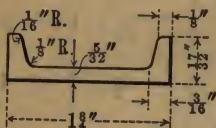
1.33 lbs.

**C-200**

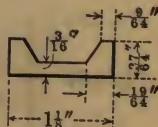
1.12 lbs.

**C-193**

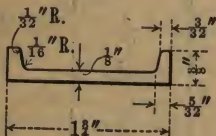
1.33 lbs.

**C-201**

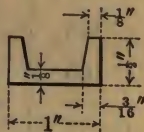
1.07 lbs.

**C-195**

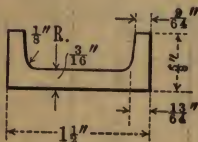
0.96 lbs.

**C-203**

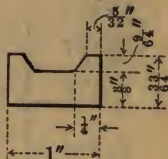
0.83 lbs.

**C-197**

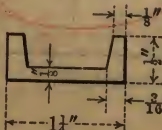
1.47 lbs.

**C-205**

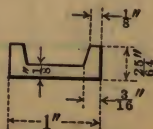
1.47 lbs.

**C-199**

0.93 lbs.

**C-207**

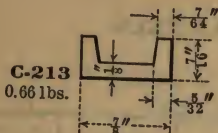
0.71 lbs.



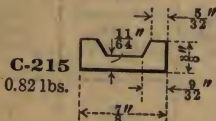
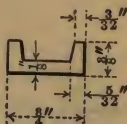
## SPECIAL CHANNELS

Section Index	Size of Section, Inches	Width of Flange, Inches	Thickness of Web, Inches	Weight per Foot, Pounds
C-190	$1\frac{3}{4}$	$\frac{11}{16}$	$\frac{3}{16}$	1.71
C-191	$1\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{8}$	1.33
C-193	$1\frac{3}{4}$	$\frac{17}{32}$	$\frac{5}{32}$	1.33
C-195	$1\frac{3}{4}$	$\frac{3}{8}$	$\frac{1}{8}$	.96
C-197	$1\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{16}$	1.47
C-199	$1\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{8}$	.93
C-200	$1\frac{1}{8}$	$\frac{9}{16}$	$\frac{3}{16}$	1.12
C-201	$1\frac{1}{8}$	$\frac{27}{64}$	$\frac{3}{16}$	1.07
C-203	1	$\frac{1}{2}$	$\frac{1}{8}$	.83
C-205	1	$\frac{33}{64}$	$\frac{3}{8}$	1.47
C-207	1	$\frac{25}{64}$	$\frac{1}{8}$	.71

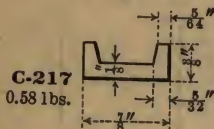
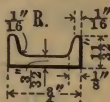
## SPECIAL CHANNELS



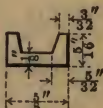
**C-219**  
0.54 lbs.



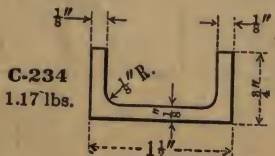
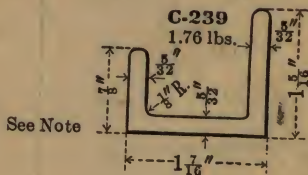
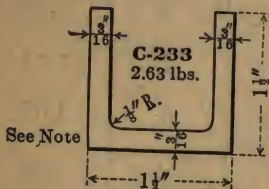
**C-221**  
0.40 lbs.



**C-223**  
0.43 lbs.



## BOX CHANNELS



NOTE.—C-233 and C-239 made only by special arrangement.

**SPECIAL CHANNELS**

Section Index	Size of Section, Inches	Width of Flange, Inches	Thickness of Web, Inches	Weight per Foot, Pounds
C-213	$\frac{7}{8}$	$\frac{7}{16}$	$\frac{1}{8}$	.66
C-215	$\frac{7}{8}$	$\frac{3}{8}$	$\frac{11}{64}$	.82
C-217	$\frac{7}{8}$	$\frac{3}{8}$	$\frac{1}{8}$	.58
C-219	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{1}{8}$	.54
C-221	$\frac{3}{4}$	$\frac{11}{32}$	$\frac{3}{32}$	.40
C-223	$\frac{5}{8}$	$\frac{5}{16}$	$\frac{1}{8}$	.43

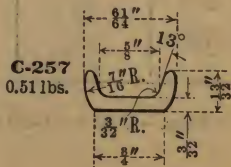
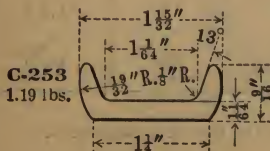
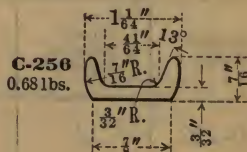
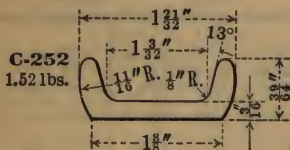
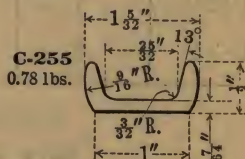
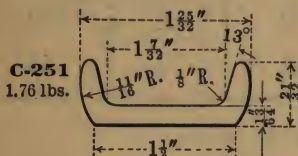
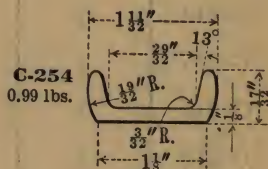
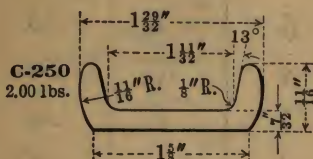
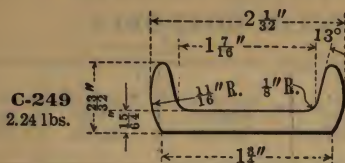
**BOX CHANNELS**

Section Index	Size of Section, Inches	Width of Flange, Inches	Thickness of Web, Inches	Weight per Foot, Pounds
*C-233	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{16}$	2.63
C-234	$1\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{8}$	1.17
*C-239	$1\frac{7}{16}$	$1\frac{5}{16}$ & $\frac{7}{8}$	$\frac{5}{32}$	1.76

\* NOTE. — C-233 and C-239 made only by special arrangement.



## RUBBER TIRE CHANNELS

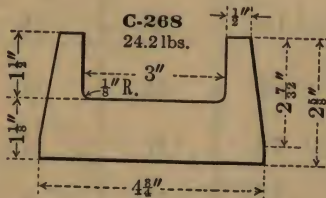
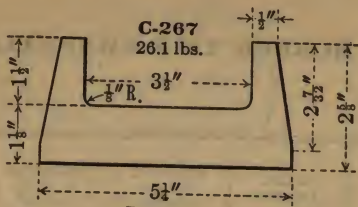


## RUBBER TIRE CHANNELS

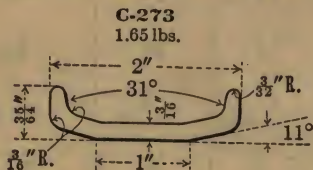
Section Index	Base, Inches	Width of Flange, Inches	Thickness of Web, Inches	Weight per Foot, Pounds
C-249	$1\frac{3}{4}$	$\frac{23}{32}$	$\frac{15}{64}$	2.24
C-250	$1\frac{5}{8}$	$\frac{11}{16}$	$\frac{7}{32}$	2.00
C-251	$1\frac{1}{2}$	$\frac{21}{32}$	$\frac{13}{64}$	1.76
C-252	$1\frac{3}{8}$	$\frac{39}{64}$	$\frac{3}{16}$	1.52
C-253	$1\frac{1}{4}$	$\frac{9}{16}$	$\frac{11}{64}$	1.19
C-254	$1\frac{1}{8}$	$\frac{17}{32}$	$\frac{1}{8}$	.99
C-255	1	$\frac{1}{2}$	$\frac{7}{64}$	.78
C-256	$\frac{7}{8}$	$\frac{7}{16}$	$\frac{3}{32}$	.68
C-257	$\frac{3}{4}$	$\frac{13}{32}$	$\frac{3}{32}$	.51

NOTE.— These sections are standard as adopted by the National Carriage and Wagon Makers' Association.

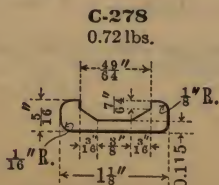
## BEVEL FLANGE CHANNELS



## BEVEL BACK CHANNEL



## DASH CHANNEL





**BEVEL FLANGE CHANNELS**

Section Index	Size, Inches	Weight per Foot, Pounds
C-267	$5\frac{1}{4} \times 2\frac{5}{8} \times 1\frac{1}{8}$	26.1
C-268	$4\frac{3}{4} \times 2\frac{5}{8} \times 1\frac{1}{8}$	24.2

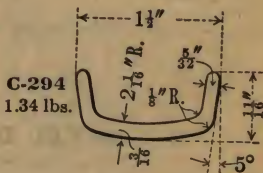
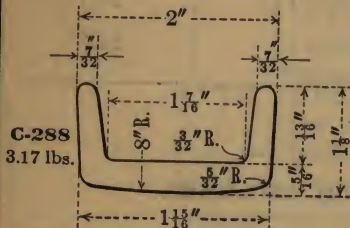
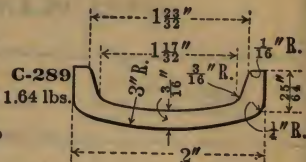
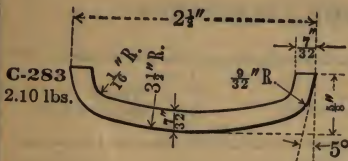
**BEVEL BACK CHANNEL**

Section Index	Size, Inches	Weight per Foot, Pounds
C-273	$2 \times \frac{35}{64} \times \frac{3}{16}$	1.65

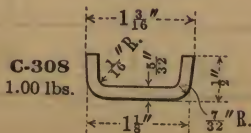
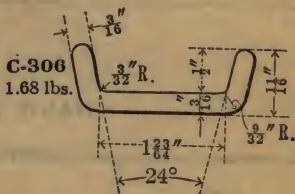
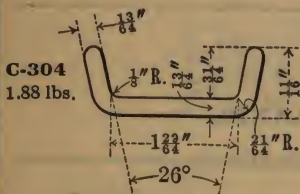
**DASH CHANNEL**

Section Index	Size, Inches	Weight per Foot, Pounds
C-278	$1\frac{1}{8} \times \frac{5}{16} \times .115$	.72

## ROUND BACK CHANNELS



## ODD CHANNELS



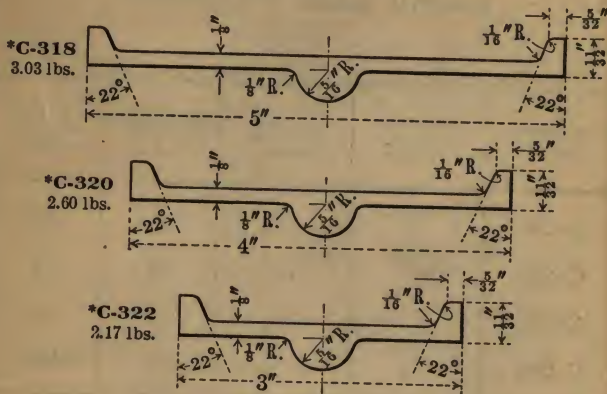
# ROUND BACK CHANNELS

Section Index	Size of Section, Inches	Width of Flange, Inches	Thickness of Web, Inches	Weight Per Foot, Pounds
C-283	$2\frac{1}{2}$	$\frac{5}{8}$	$\frac{7}{32}$	2.10
C-288	2	$1\frac{1}{8}$	$\frac{5}{16}$	3.17
C-289	2	$\frac{25}{64}$	$\frac{3}{16}$	1.64
C-294	$1\frac{1}{2}$	$1\frac{1}{8}$	$\frac{3}{16}$	1.34

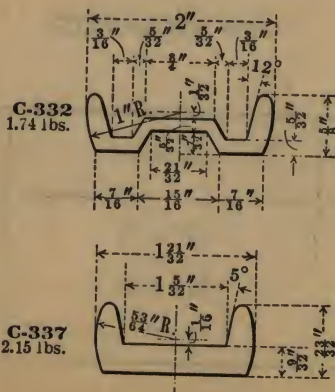
# ODD CHANNELS

Section Index	Size, Inches	Weight per Foot, Pounds
C-304	$1\frac{29}{64} \times \frac{11}{16}$	1.88
C-306	$1\frac{23}{64} \times \frac{11}{16}$	1.68
C-308	$1\frac{1}{8} \times \frac{1}{2}$	1.00

## SPECIAL BEADED CHANNELS



## SPECIAL TIRE CHANNELS



\*These sections have been inserted for reference only.

**SPECIAL BEADED CHANNELS**

Section Index	Size of Section, Inches	Width of Flange, Inches	Thickness of Web, Inches	Weight per Foot, Pounds
*C-318	5	$11\frac{1}{32}$	$\frac{1}{8}$	3.03
*C-320	4	$11\frac{1}{32}$	$\frac{1}{8}$	2.60
*C-322	3	$11\frac{1}{32}$	$\frac{1}{8}$	2.17

**SPECIAL TIRE CHANNELS**

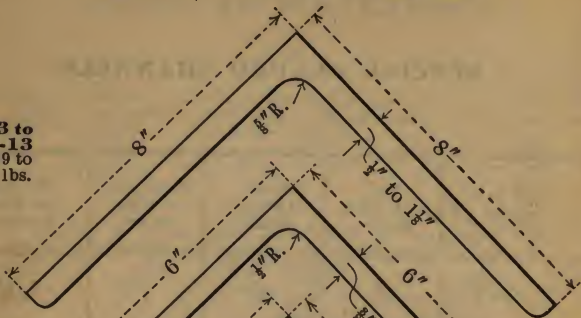
Section Index	Size, Inches	Weight per Foot, Pounds
C-332	2 x $\frac{5}{8}$	1.74
C-337	$1\frac{21}{32}$ x $\frac{23}{32}$	2.15

\*These sections have been inserted for reference only.

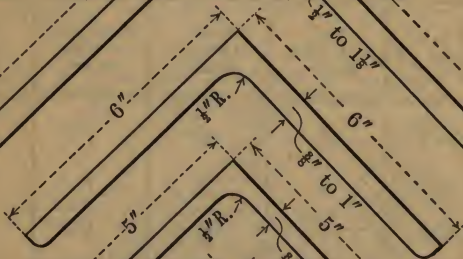


# **ANGLES WITH EQUAL LEGS**

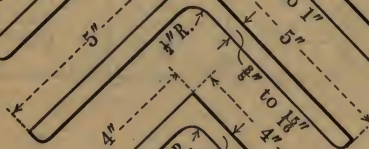
**A-3 to  
A-13**  
56.9 to  
26.4 lbs.



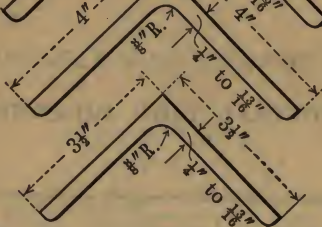
**A-17 to  
A-27**  
37.4 to  
14.9 lbs.



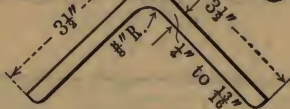
**A-33 to  
A-42**  
28.9 to  
12.3 lbs.



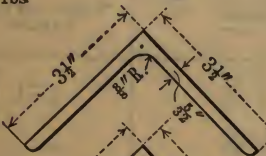
**A-47 to  
A-56**  
19.9 to  
6.6 lbs.



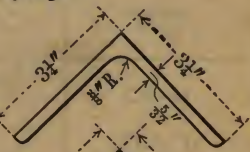
**A-61 to  
A-70**  
17.1 to  
5.8 lbs.



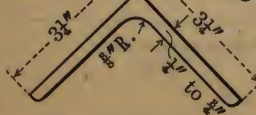
**A-75**  
3.64  
lbs.



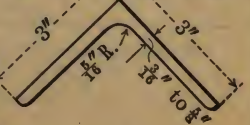
**A-93**  
3.37  
lbs.



**A-80  
to  
A-88**  
14.7 to  
5.4  
lbs.



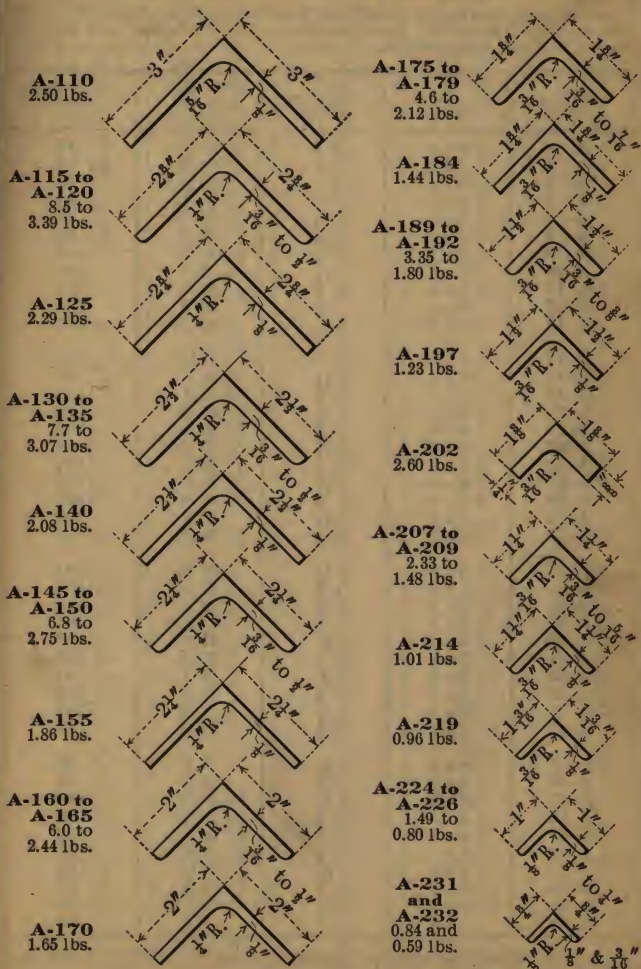
**A-98 to  
A-105**  
11.5 to  
3.71 lbs.



NOTE.—For weights and dimensions see pages 41 and 42.



## ANGLES WITH EQUAL LEGS



NOTE.—For weights and dimensions see pages 42 and 43.

# ANGLES WITH EQUAL LEGS

Sections appearing in bold-face type adopted as standard by the Association of American Steel Manufacturers, for bridge, car, ship and general building construction.

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A-3	8 x 8	1 $\frac{1}{4}$	56.9	75
A-4	8 x 8	1 $\frac{1}{16}$	54.0	75
A-5	8 x 8	1	51.0	80
A-6	8 x 8	$\frac{13}{16}$	48.1	80
A-7	8 x 8	$\frac{7}{8}$	45.0	90
A-8	8 x 8	$\frac{13}{16}$	42.0	90
A-9	8 x 8	$\frac{1}{2}$	38.9	100
A-10	8 x 8	$\frac{11}{16}$	35.8	100
A-11	8 x 8	$\frac{3}{4}$	32.7	100
A-12	8 x 8	$\frac{9}{16}$	29.6	100
A-13	8 x 8	$\frac{1}{2}$	26.4	100
A-17	6 x 6	1	37.4	100
A-18	6 x 6	$\frac{13}{16}$	35.3	100
A-19	6 x 6	$\frac{7}{8}$	33.1	100
A-20	6 x 6	$\frac{13}{16}$	31.0	100
A-21	6 x 6	$\frac{1}{2}$	28.7	100
A-22	6 x 6	$\frac{11}{16}$	26.5	100
A-23	6 x 6	$\frac{3}{4}$	24.2	100
A-24	6 x 6	$\frac{9}{16}$	21.9	100
A-25	6 x 6	$\frac{7}{8}$	19.6	100
A-26	6 x 6	$\frac{1}{2}$	17.2	100
A-27	6 x 6	$\frac{13}{16}$	14.9	100
A-33	5 x 5	$\frac{13}{16}$	28.9	100
A-34	5 x 5	$\frac{7}{8}$	27.2	100
A-35	5 x 5	$\frac{13}{16}$	25.4	100
A-36	5 x 5	$\frac{1}{2}$	23.6	100
A-37	5 x 5	$\frac{11}{16}$	21.8	100
A-38	5 x 5	$\frac{3}{4}$	20.0	100
A-39	5 x 5	$\frac{9}{16}$	18.1	100
A-40	5 x 5	$\frac{7}{8}$	16.2	100
A-41	5 x 5	$\frac{1}{2}$	14.3	100
A-42	5 x 5	$\frac{13}{16}$	12.3	100
A-47	4 x 4	$\frac{13}{16}$	19.9	42
A-48	4 x 4	$\frac{1}{2}$	18.5	45
A-49	4 x 4	$\frac{11}{16}$	17.1	50
A-50	4 x 4	$\frac{3}{4}$	15.7	50
A-51	4 x 4	$\frac{9}{16}$	14.3	55
A-52	4 x 4	$\frac{7}{8}$	12.8	60
A-53	4 x 4	$\frac{1}{2}$	11.3	65
A-54	4 x 4	$\frac{3}{4}$	9.8	65
A-55	4 x 4	$\frac{5}{8}$	8.2	65
A-56	4 x 4	$\frac{1}{2}$	6.6	65

NOTE.— In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

NOTE.— Lengths over 75 feet are made only by special arrangement.

## ANGLES WITH EQUAL LEGS

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A- 61	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{13}{16}$	17.1	46
A- 62	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{3}{4}$	16.0	50
A- 63	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{11}{16}$	14.8	54
A- 64	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{5}{8}$	13.6	60
A- 65	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{9}{16}$	12.4	65
A- 66	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{1}{2}$	11.1	65
A- 67	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{7}{16}$	9.8	65
A- 68	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{3}{8}$	8.5	65
A- 69	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{5}{16}$	7.2	65
A- 70	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{1}{4}$	5.8	65
A- 75	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{5}{32}$	3.64	45
A- 80	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{3}{4}$	14.7	35
A- 81	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{11}{16}$	13.6	40
A- 82	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{5}{8}$	12.5	44
A- 83	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{9}{16}$	11.4	50
A- 84	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{1}{2}$	10.2	55
A- 85	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{7}{16}$	9.1	60
A- 86	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{3}{8}$	7.9	65
A- 87	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{5}{16}$	6.6	65
A- 88	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{1}{4}$	5.4	65
A- 93	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{5}{32}$	3.37	50
A- 98	3 x 3	$\frac{5}{8}$	11.5	50
A- 99	3 x 3	$\frac{9}{16}$	10.4	55
A-100	3 x 3	$\frac{1}{2}$	9.4	60
A-101	3 x 3	$\frac{7}{16}$	8.3	65
A-102	3 x 3	$\frac{3}{8}$	7.2	65
A-103	3 x 3	$\frac{5}{16}$	6.1	65
A-104	3 x 3	$\frac{1}{4}$	4.9	65
A-105	3 x 3	$\frac{3}{16}$	3.71	45
A-110	3 x 3	$\frac{1}{8}$	2.50	40
A-115	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{1}{2}$	8.5	28
A-116	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{7}{16}$	7.6	32
A-117	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{3}{8}$	6.6	38
A-118	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{5}{16}$	5.6	44
A-119	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{1}{4}$	4.5	50
A-120	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{3}{16}$	3.39	50
A-125	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{1}{8}$	2.29	40

NOTE.—In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

## ANGLES WITH EQUAL LEGS

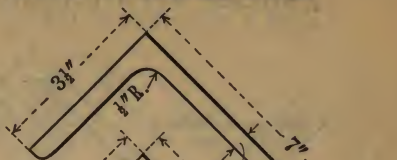
Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A-130	2½ x 2½	½	7.7	31
A-131	2½ x 2½	⅞	6.8	35
A-132	2½ x 2½	1	5.9	40
A-133	2½ x 2½	⅞	5.0	50
A-134	2½ x 2½	¾	4.1	50
A-135	2½ x 2½	⅞	3.07	50
A-140	2½ x 2½	½	2.08	50
A-145	2½ x 2½	½	6.8	35
A-146	2½ x 2½	⅞	6.1	40
A-147	2½ x 2½	1	5.3	45
A-148	2½ x 2½	⅞	4.5	50
A-149	2½ x 2½	¾	3.62	50
A-150	2½ x 2½	⅞	2.75	50
A-155	2½ x 2½	½	1.86	50
A-160	2 x 2	½	6.0	45
A-161	2 x 2	⅞	5.3	45
A-162	2 x 2	1	4.7	45
A-163	2 x 2	⅞	3.92	50
A-164	2 x 2	¾	3.19	50
A-165	2 x 2	⅞	2.44	50
A-170	2 x 2	½	1.65	50
A-175	1½ x 1½	⅞	4.6	35
A-176	1½ x 1½	1	3.99	35
A-177	1½ x 1½	⅞	3.39	35
A-178	1½ x 1½	¾	2.77	35
A-179	1½ x 1½	⅞	2.12	35
A-184	1½ x 1½	½	1.44	35
A-189	1½ x 1½	½	3.35	35
A-190	1½ x 1½	⅞	2.86	35
A-191	1½ x 1½	¾	2.34	35
A-192	1½ x 1½	⅞	1.80	35
A-197	1½ x 1½	½	1.23	35
A-202	1½ x 1½	½ x ½	2.60	35
A-207	1½ x 1½	⅞	2.33	35
A-208	1½ x 1½	¾	1.92	35
A-209	1½ x 1½	⅞	1.48	35
A-214	1½ x 1½	½	1.01	35
A-219	1½ x 1½	½	.96	35
A-224	1 x 1	½	1.49	45
A-225	1 x 1	⅞	1.16	45
A-226	1 x 1	¾	.80	45
A-231	¾ x ¾	⅞	.84	45
A-232	¾ x ¾	½	.59	45

NOTE.— In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

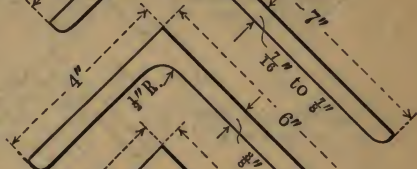


# **ANGLES WITH UNEQUAL LEGS**

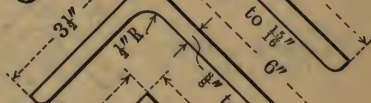
**A-244 to A-251**  
23.7 to 15.0 lbs.



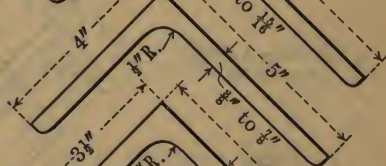
**A-256 to A-265**  
23.9 to 12.3 lbs.



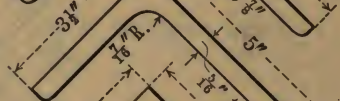
**A-271 to A-280**  
27.3 to 11.7 lbs.



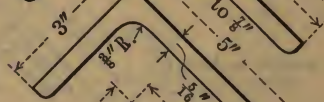
**A-285 to A-293**  
24.2 to 11.0 lbs.



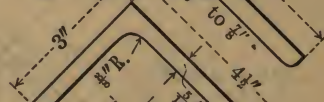
**A-298 to A-307**  
22.7 to 8.7 lbs.



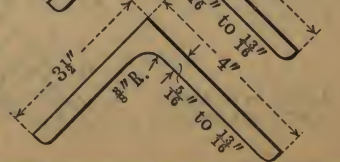
**A-312 to A-321**  
21.2 to 8.2 lbs.



**A-326 to A-334**  
18.5 to 7.7 lbs.



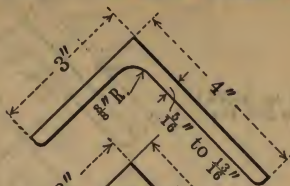
**A-339 to A-347**  
13.5 to 7.7 lbs.



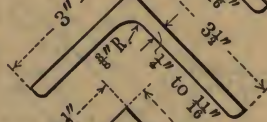
NOTE.—For weights and dimensions see pages 47, 48 and 49.

# ANGLES WITH UNEQUAL LEGS

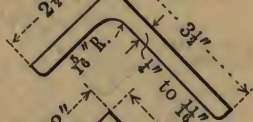
**A-352 to A-360**  
17.1 to 7.2 lbs.



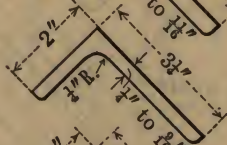
**A-365 to A-372**  
13.6 to 5.4 lbs.



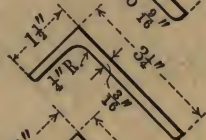
**A-377 to A-384**  
12.5 to 4.9 lbs.



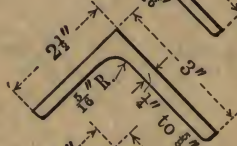
**A-389 to A-394**  
9.0 to 4.3 lbs.



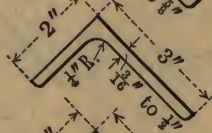
**A-399**  
2.91 lbs.



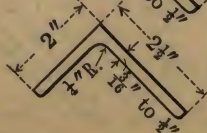
**A-404 to A-410**  
10.4 to 4.5 lbs.



**A-415 to A-420**  
7.7 to 3.07 lbs.



**A-425 to A-430**  
6.8 to 2.75 lbs.



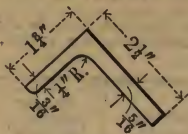
NOTE.—For weights and dimensions see pages 49, 50 and 51.



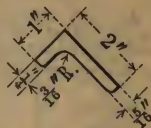
## ANGLES WITH UNEQUAL LEGS

**A-435**

3.58 lbs.

**A-488**

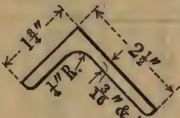
2.71 lbs.

**A-440**

&amp;

**A-441**

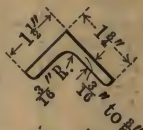
3.40 &amp; 2.59 lbs.

**A-493**

to

**A-496**

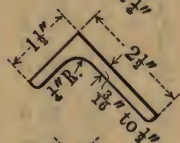
3.67 to 1.96 lbs.

**A-446**

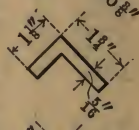
to

**A-451**

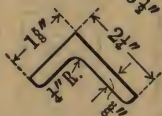
6.0 to 2.44 lbs.

**A-501**

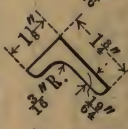
2.73 lbs.

**A-456**

4.5 lbs.

**A-502**

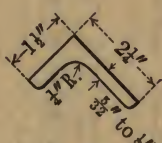
2.61 lbs.

**A-461**

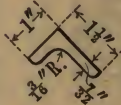
to

**A-467**

5.6 to 1.91 lbs.

**A-507**

1.70 lbs.

**A-512**

&amp;

**A-513**

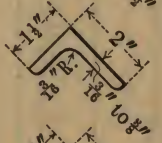
1.32 &amp; 0.91 lbs.

**A-472**

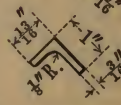
to

**A-475**

3.99 to 2.12 lbs.

**A-518**

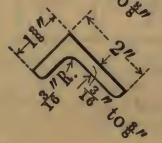
1.04 lbs.

**A-480**

to

**A-483**

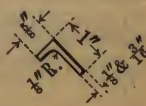
3.83 to 2.04 lbs.

**A-523**

&amp;

**A-524**

0.92 &amp; 0.64 lbs.



NOTE.— For weights and dimensions see pages 51 and 52.

### ANGLES WITH UNEQUAL LEGS

Sections appearing in bold-face type adopted as standard by the Association of American Steel Manufacturers, for bridge, car, ship and general building construction.

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A-244	7 x 3½	$\frac{7}{8}$	28.7	80
A-245	7 x 3½	$\frac{13}{16}$	26.8	85
A-246	7 x 3½	$\frac{3}{4}$	24.9	85
A-247	7 x 3½	$\frac{11}{16}$	23.0	90
A-248	7 x 3½	$\frac{5}{8}$	21.0	90
A-249	7 x 3½	$\frac{9}{16}$	19.1	95
A-250	7 x 3½	$\frac{1}{2}$	17.0	95
A-251	7 x 3½	$\frac{7}{16}$	15.0	95
A-256	6 x 4	$\frac{15}{16}$	28.9	75
A-257	6 x 4	$\frac{7}{8}$	27.2	80
A-258	6 x 4	$\frac{13}{16}$	25.4	90
A-259	6 x 4	$\frac{3}{4}$	23.6	100
A-260	6 x 4	$\frac{11}{16}$	21.8	100
A-261	6 x 4	$\frac{5}{8}$	20.0	100
A-262	6 x 4	$\frac{9}{16}$	18.1	100
A-263	6 x 4	$\frac{1}{2}$	16.2	100
A-264	6 x 4	$\frac{7}{16}$	14.3	100
A-265	6 x 4	$\frac{3}{8}$	12.3	100
A-271	6 x 3½	$\frac{15}{16}$	27.3	75
A-272	6 x 3½	$\frac{7}{8}$	25.7	80
A-273	6 x 3½	$\frac{13}{16}$	24.0	85
A-274	6 x 3½	$\frac{3}{4}$	22.4	95
A-275	6 x 3½	$\frac{11}{16}$	20.6	100
A-276	6 x 3½	$\frac{5}{8}$	18.9	100
A-277	6 x 3½	$\frac{9}{16}$	17.1	100
A-278	6 x 3½	$\frac{1}{2}$	15.3	100
A-279	6 x 3½	$\frac{7}{16}$	13.5	100
A-280	6 x 3½	$\frac{3}{8}$	11.7	100

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

NOTE. — Lengths over 75 feet are made only by special arrangement.

# **ANGLES WITH UNEQUAL LEGS**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A-285	5 x 4	$\frac{7}{8}$	24.2	60
A-286	5 x 4	$\frac{13}{16}$	22.7	68
A-287	5 x 4	$\frac{11}{4}$	21.1	75
A-288	5 x 4	$\frac{11}{16}$	19.5	82
A-289	5 x 4	$\frac{9}{8}$	17.8	90
A-290	5 x 4	$\frac{9}{16}$	16.2	100
A-291	5 x 4	$\frac{1}{2}$	14.5	100
A-292	5 x 4	$\frac{7}{16}$	12.8	100
A-293	5 x 4	$\frac{5}{8}$	11.0	100
A-298	5 x 3 $\frac{1}{2}$	$\frac{7}{8}$	22.7	65
A-299	5 x 3 $\frac{1}{2}$	$\frac{13}{16}$	21.3	73
A-300	5 x 3 $\frac{1}{2}$	$\frac{11}{4}$	19.8	80
A-301	5 x 3 $\frac{1}{2}$	$\frac{11}{16}$	18.3	87
A-302	5 x 3 $\frac{1}{2}$	$\frac{9}{8}$	16.8	90
A-303	5 x 3 $\frac{1}{2}$	$\frac{9}{16}$	15.2	100
A-304	5 x 3 $\frac{1}{2}$	$\frac{7}{2}$	13.6	100
A-305	5 x 3 $\frac{1}{2}$	$\frac{7}{16}$	12.0	100
A-306	5 x 3 $\frac{1}{2}$	$\frac{5}{8}$	10.4	100
A-307	5 x 3 $\frac{1}{2}$	$\frac{5}{16}$	8.7	100
A-312	5 x 3	$\frac{7}{8}$	21.2	65
A-313	5 x 3	$\frac{13}{16}$	19.9	75
A-314	5 x 3	$\frac{11}{4}$	18.5	82
A-315	5 x 3	$\frac{11}{16}$	17.1	90
A-316	5 x 3	$\frac{9}{8}$	15.7	97
A-317	5 x 3	$\frac{9}{16}$	14.3	100
A-318	5 x 3	$\frac{7}{2}$	12.8	100
A-319	5 x 3	$\frac{7}{16}$	11.3	100
A-320	5 x 3	$\frac{5}{8}$	9.8	100
A-321	5 x 3	$\frac{5}{16}$	8.2	100

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

NOTE.—Lengths over 75 feet are made only by special arrangement.

# **ANGLES WITH UNEQUAL LEGS**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A-326	$4\frac{1}{2} \times 3$	$\frac{13}{16}$	18.5	44
A-327	$4\frac{1}{2} \times 3$	$\frac{3}{4}$	17.3	46
A-328	$4\frac{1}{2} \times 3$	$\frac{11}{16}$	16.0	50
A-329	$4\frac{1}{2} \times 3$	$\frac{5}{8}$	14.7	54
A-330	$4\frac{1}{2} \times 3$	$\frac{9}{16}$	13.3	60
A-331	$4\frac{1}{2} \times 3$	$\frac{1}{2}$	11.9	65
A-332	$4\frac{1}{2} \times 3$	$\frac{7}{16}$	10.6	65
A-333	$4\frac{1}{2} \times 3$	$\frac{3}{8}$	9.1	65
A-334	$4\frac{1}{2} \times 3$	$\frac{5}{16}$	7.7	65
A-339	$4 \times 3\frac{1}{2}$	$\frac{13}{16}$	18.5	44
A-340	$4 \times 3\frac{1}{2}$	$\frac{3}{4}$	17.3	46
A-341	$4 \times 3\frac{1}{2}$	$\frac{11}{16}$	16.0	50
A-342	$4 \times 3\frac{1}{2}$	$\frac{5}{8}$	14.7	54
A-343	$4 \times 3\frac{1}{2}$	$\frac{9}{16}$	13.3	60
A-344	$4 \times 3\frac{1}{2}$	$\frac{1}{2}$	11.9	65
A-345	$4 \times 3\frac{1}{2}$	$\frac{7}{16}$	10.6	65
A-346	$4 \times 3\frac{1}{2}$	$\frac{3}{8}$	9.1	65
A-347	$4 \times 3\frac{1}{2}$	$\frac{5}{16}$	7.7	65
A-352	$4 \times 3$	$\frac{13}{16}$	17.1	46
A-353	$4 \times 3$	$\frac{3}{4}$	16.0	50
A-354	$4 \times 3$	$\frac{11}{16}$	14.8	54
A-355	$4 \times 3$	$\frac{5}{8}$	13.6	60
A-356	$4 \times 3$	$\frac{9}{16}$	12.4	65
A-357	$4 \times 3$	$\frac{1}{2}$	11.1	65
A-358	$4 \times 3$	$\frac{7}{16}$	9.8	65
A-359	$4 \times 3$	$\frac{3}{8}$	8.5	65
A-360	$4 \times 3$	$\frac{5}{16}$	7.2	65

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.



## ANGLES WITH UNEQUAL LEGS

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A-375	$3\frac{1}{2} \times 3$	$\frac{11}{16}$	13.6	40
A-366	$3\frac{1}{2} \times 3$	$\frac{5}{8}$	12.5	44
A-367	$3\frac{1}{2} \times 3$	$\frac{9}{16}$	11.4	48
A-368	$3\frac{1}{2} \times 3$	$\frac{1}{2}$	10.2	50
A-369	$3\frac{1}{2} \times 3$	$\frac{7}{16}$	9.1	55
A-370	$3\frac{1}{2} \times 3$	$\frac{3}{8}$	7.9	60
A-371	$3\frac{1}{2} \times 3$	$\frac{5}{16}$	6.6	65
A-372	$3\frac{1}{2} \times 3$	$\frac{1}{4}$	5.4	65
A-377	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{11}{16}$	12.5	44
A-378	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{5}{8}$	11.5	48
A-379	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{9}{16}$	10.4	50
A-380	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{1}{2}$	9.4	54
A-381	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{7}{16}$	8.3	65
A-382	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{3}{8}$	7.2	65
A-383	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{5}{16}$	6.1	65
A-384	$3\frac{1}{2} \times 2\frac{1}{2}$	$\frac{1}{4}$	4.9	65
A-389	$3\frac{1}{2} \times 2$	$\frac{9}{16}$	9.0	26
A-390	$3\frac{1}{2} \times 2$	$\frac{1}{2}$	8.1	30
A-391	$3\frac{1}{2} \times 2$	$\frac{7}{16}$	7.2	35
A-392	$3\frac{1}{2} \times 2$	$\frac{3}{8}$	6.3	40
A-393	$3\frac{1}{2} \times 2$	$\frac{5}{16}$	5.3	45
A-394	$3\frac{1}{2} \times 2$	$\frac{1}{4}$	4.3	50
A-399	$3\frac{1}{2} \times 1\frac{1}{2}$	$\frac{3}{16}$	2.91	40
A-404	$3 \times 2\frac{1}{2}$	$\frac{5}{8}$	10.4	50
A-405	$3 \times 2\frac{1}{2}$	$\frac{9}{16}$	9.5	55
A-406	$3 \times 2\frac{1}{2}$	$\frac{1}{2}$	8.5	65
A-407	$3 \times 2\frac{1}{2}$	$\frac{7}{16}$	7.6	65
A-408	$3 \times 2\frac{1}{2}$	$\frac{3}{8}$	6.6	65
A-409	$3 \times 2\frac{1}{2}$	$\frac{5}{16}$	5.6	65
A-410	$3 \times 2\frac{1}{2}$	$\frac{1}{4}$	4.5	65

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.



# **ANGLES WITH UNEQUAL LEGS**

Section Index	Size Inches	Thickness, Inches	Weight per Foot Pounds	Maximum Length, Feet
A-415	3 x 2	$\frac{1}{4}$	7.7	31
A-416	3 x 2	$\frac{7}{16}$	6.8	35
A-417	3 x 2	$\frac{3}{8}$	5.9	40
A-418	3 x 2	$\frac{5}{16}$	5.0	50
A-419	3 x 2	$\frac{1}{4}$	4.1	50
A-420	3 x 2	$\frac{3}{16}$	3.07	50
A-425	2 $\frac{1}{2}$ x 2	$\frac{1}{4}$	6.8	35
A-426	2 $\frac{1}{2}$ x 2	$\frac{7}{16}$	6.1	45
A-427	2 $\frac{1}{2}$ x 2	$\frac{3}{8}$	5.3	45
A-428	2 $\frac{1}{2}$ x 2	$\frac{5}{16}$	4.5	50
A-429	2 $\frac{1}{2}$ x 2	$\frac{1}{4}$	3.62	50
A-430	2 $\frac{1}{2}$ x 2	$\frac{3}{16}$	2.75	50
A-435	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{3}{16}$ x $\frac{5}{16}$	3.58	50
A-440	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	3.40	50
A-441	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{3}{16}$	2.59	50
A-446	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	6.0	45
A-447	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{7}{16}$	5.3	45
A-448	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{3}{8}$	4.7	45
A-449	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{5}{16}$	3.92	50
A-450	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	3.19	50
A-451	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{3}{16}$	2.44	50
A-456	2 $\frac{1}{2}$ x 1 $\frac{5}{8}$	$\frac{3}{8}$	4.5	45
A-461	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	5.6	45
A-462	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{7}{16}$	5.0	45
A-463	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{3}{8}$	4.3	45
A-464	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{5}{16}$	3.66	50
A-465	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	2.98	50
A-466	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{3}{16}$	2.28	50
A-467	2 $\frac{1}{2}$ x 1 $\frac{1}{2}$	$\frac{5}{32}$	1.91	50

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

## ANGLES WITH UNEQUAL LEGS

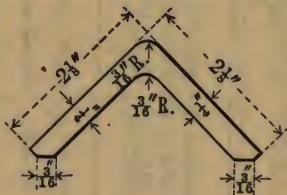
Section Index	Size Inches	Thickness, Inches	Weight per Foot, Pounds	Maximum Length, Feet
A-472	2 x 1 $\frac{1}{2}$	$\frac{3}{8}$	3.99	35
A-473	2 x 1 $\frac{1}{2}$	$\frac{5}{16}$	3.39	35
A-474	2 x 1 $\frac{1}{2}$	$\frac{1}{4}$	2.77	35
A-475	2 x 1 $\frac{1}{2}$	$\frac{3}{16}$	2.12	35
A-480	2 x 1 $\frac{3}{8}$	$\frac{3}{8}$	3.83	35
A-481	2 x 1 $\frac{3}{8}$	$\frac{5}{16}$	3.26	35
A-482	2 x 1 $\frac{3}{8}$	$\frac{1}{4}$	2.66	35
A-483	2 x 1 $\frac{3}{8}$	$\frac{3}{16}$	2.04	35
A-488	2 x 1	$\frac{5}{16}$ x $\frac{1}{4}$	2.71	35
A-493	1 $\frac{1}{4}$ x 1 $\frac{1}{2}$	$\frac{3}{8}$	3.67	35
A-494	1 $\frac{1}{4}$ x 1 $\frac{1}{2}$	$\frac{5}{16}$	3.13	35
A-495	1 $\frac{1}{4}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	2.55	35
A-496	1 $\frac{1}{4}$ x 1 $\frac{1}{2}$	$\frac{3}{16}$	1.96	35
A-501	1 $\frac{1}{4}$ x 1 $\frac{1}{8}$	$\frac{5}{16}$	2.73	35
A-502	1 $\frac{1}{4}$ x 1 $\frac{1}{8}$	$\frac{19}{64}$	2.61	35
A-507	1 $\frac{1}{2}$ x 1	$\frac{7}{32}$	1.70	35
A-512	1 $\frac{3}{8}$ x $\frac{7}{8}$	$\frac{3}{16}$	1.32	45
A-513	1 $\frac{3}{8}$ x $\frac{7}{8}$	$\frac{7}{8}$	.91	45
A-518	1 x $\frac{3}{16}$	$\frac{3}{16}$	1.04	45
A-523	1 x $\frac{5}{8}$	$\frac{3}{16}$	.92	45
A-524	1 x $\frac{5}{8}$	$\frac{1}{8}$	.64	45

In ordering extreme lengths, a leeway of five feet will facilitate the execution of orders.

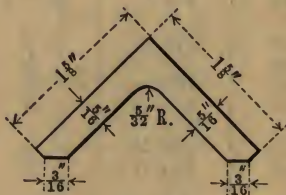
## COLD ROLLED HARVESTER ANGLES

WITH EQUAL LEGS

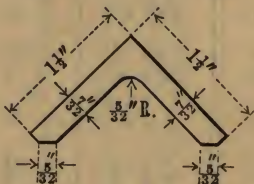
**A-534**  
3.37 lbs.



**A-539**  
3.00 lbs.



**A-544, A-545**  
2.35 and 2.00 lbs.



**A-550**  
1.80 lbs.



NOTE.—The edges of legs are not cold rolled.

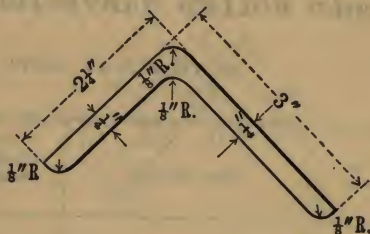
**COLD ROLLED HARVESTER ANGLES****WITH EQUAL LEGS**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
A-534	$2\frac{1}{8} \times 2\frac{1}{8}$	$\frac{1}{4}$	3.37
A-539	$1\frac{5}{8} \times 1\frac{5}{8}$	$\frac{5}{16}$	3.00
A-544	$1\frac{1}{2} \times 1\frac{1}{2}$	$\frac{1}{4}$	2.35
A-545	$1\frac{1}{2} \times 1\frac{1}{2}$	$\frac{7}{32}$	2.00
A-550	$1\frac{5}{16} \times 1\frac{5}{16}$	$\frac{7}{32}$	1.80

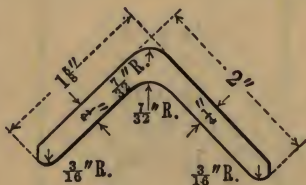
NOTE.—Edges of legs are not cold rolled.

# COLD ROLLED HARVESTER ANGLES WITH UNEQUAL LEGS

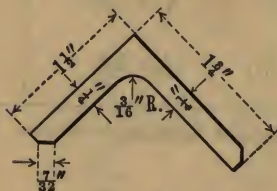
**A-560**  
4.28 lbs.



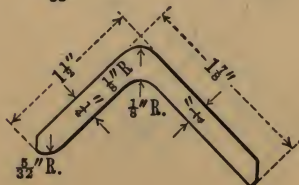
**A-565, A-566**  
3.40 and 2.75 lbs.



**A-571, A-572**  
3.06 and 2.50 lbs.



**A-577**  
2.60 lbs.



NOTE.—Edges of legs are not cold rolled.

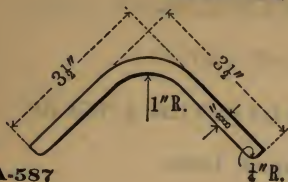


**COLD ROLLED HARVESTER ANGLES**  
**WITH UNEQUAL LEGS**

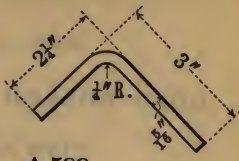
Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
A-560	3 x 2 $\frac{1}{4}$	$\frac{1}{4}$	4.28
A-565	2 x 1 $\frac{5}{8}$	$\frac{5}{16}$	3.40
A-566	2 x 1 $\frac{5}{8}$	$\frac{1}{4}$	2.75
A-571	1 $\frac{3}{4}$ x 1 $\frac{1}{2}$	$\frac{5}{16}$	3.06
A-572	1 $\frac{3}{4}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	2.50
A-577	1 $\frac{7}{8}$ x 1 $\frac{1}{2}$	$\frac{1}{4}$	2.60

NOTE.—Edges of legs are not cold rolled.

## SPECIAL ANGLES



**A-587**  
7.8 lbs.



**A-588**  
5.3 lbs.



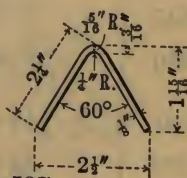
**A-589 and A-590**  
4.0 and 3.34 lbs.



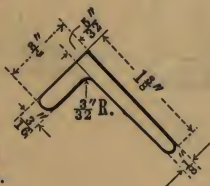
**A-591**  
0.51 lbs.



**A-596**  
2.19 lbs.



**A-597**  
1.98 lbs.



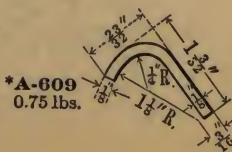
**A-602**  
1.06 lbs.



**A-603**  
1.00 lbs.



**A-604**  
1.26 lbs.



**\*A-609**  
0.75 lbs.

\*A 609 made only by special arrangement.

**SPECIAL ANGLES****ROUND BACK ANGLES**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
A-587	$3\frac{1}{4} \times 3\frac{1}{4}$	$\frac{3}{8}$	7.8
A-588	$3 \times 2\frac{1}{4}$	$\frac{5}{16}$	5.3
A-589	$2 \times 1\frac{5}{8}$	$\frac{23}{64}$	4.0
A-590	$2 \times 1\frac{5}{8}$	$\frac{19}{64}$	3.34
A-591	$\frac{5}{8} \times \frac{1}{2}$	$\frac{5}{32}$	.51

**ROUND BACK 60° ANGLES**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
A-596	$2\frac{1}{4} \times 2\frac{1}{4}$	$\frac{1}{8}$	2.19
A-597	$2\frac{1}{4} \times 2\frac{1}{4}$	$\frac{1}{8}$	1.98

**ODD ANGLES**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
A-602	$1\frac{3}{8} \times \frac{3}{4}$	$\frac{1}{8}$ to $\frac{5}{32}$	1.06
A-603	$1\frac{1}{4} \times \frac{3}{4}$	$\frac{1}{8}$ to $\frac{5}{32}$	1.00
A-604	$1\frac{1}{4} \times 1\frac{15}{32}$	$\frac{3}{4}$	1.26

**ROUND BACK ODD ANGLE**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
*A-609	$1\frac{3}{32} \times \frac{23}{32}$	$\frac{1}{8}$	.75

\*A-609 made only by special arrangement.

## TEES WITH EQUAL LEGS

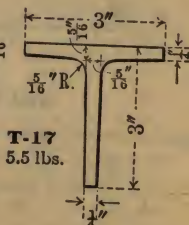
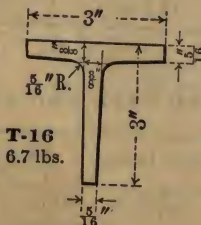
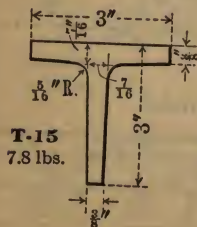
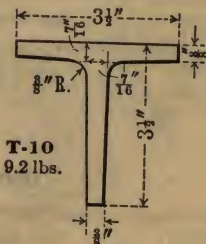
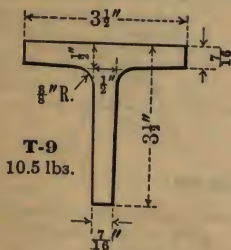
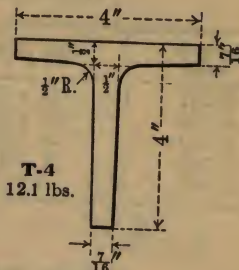
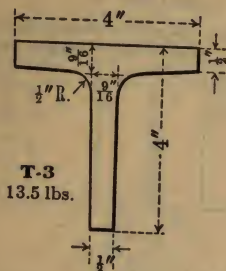
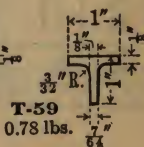
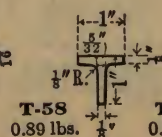
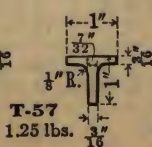
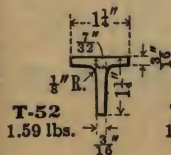
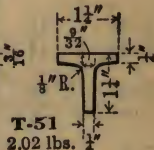
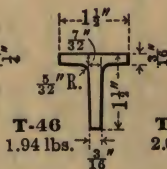
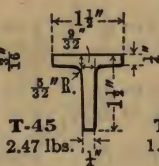
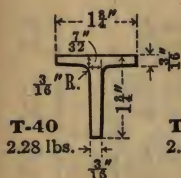
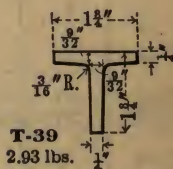
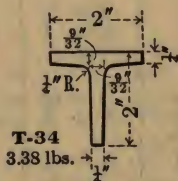
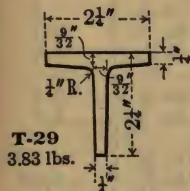
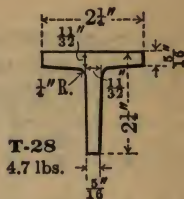
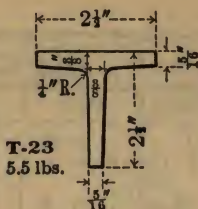
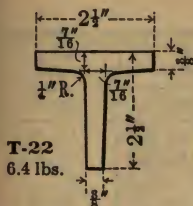


Table on page 61.

## TEES WITH EQUAL LEGS



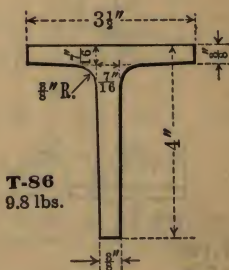
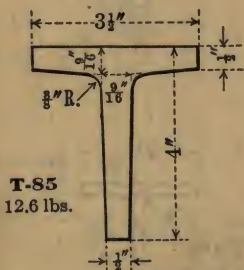
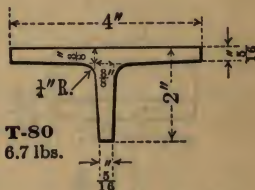
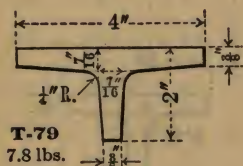
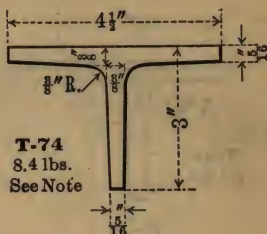
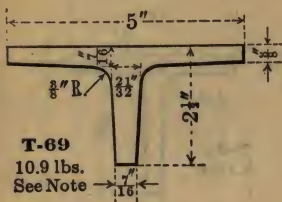


## TEES WITH EQUAL LEGS

Section Index	SIZE, INCHES		THICKNESS OF METAL, INCHES		Weight per Foot, Pounds
	Table	Stem	Table	Stem	
T- 3	4	4	$\frac{1}{2}$ to $\frac{9}{16}$	$\frac{1}{2}$ to $\frac{9}{16}$	13.5
T- 4	4	4	$\frac{7}{16}$ to $\frac{1}{2}$	$\frac{7}{16}$ to $\frac{1}{2}$	12.1
T- 9	$3\frac{1}{2}$	$3\frac{1}{2}$	$\frac{7}{16}$ to $\frac{1}{2}$	$\frac{7}{16}$ to $\frac{1}{2}$	10.5
T-10	$3\frac{1}{2}$	$3\frac{1}{2}$	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{3}{8}$ to $\frac{7}{16}$	9.2
T-15	3	3	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{3}{8}$ to $\frac{7}{16}$	7.8
T-16	3	3	$\frac{5}{16}$ to $\frac{3}{8}$	$\frac{5}{16}$ to $\frac{3}{8}$	6.7
T-17	3	3	$\frac{1}{4}$ to $\frac{5}{16}$	$\frac{1}{4}$ to $\frac{5}{16}$	5.5
T-22	$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{3}{8}$ to $\frac{7}{16}$	6.4
T-23	$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{5}{16}$ to $\frac{3}{8}$	$\frac{5}{16}$ to $\frac{3}{8}$	5.5
T-28	$2\frac{1}{4}$	$2\frac{1}{4}$	$\frac{5}{16}$ to $\frac{11}{32}$	$\frac{5}{16}$ to $\frac{11}{32}$	4.7
T-29	$2\frac{1}{4}$	$2\frac{1}{4}$	$\frac{1}{4}$ to $\frac{9}{32}$	$\frac{1}{4}$ to $\frac{9}{32}$	3.83
T-34	2	2	$\frac{1}{4}$ to $\frac{9}{32}$	$\frac{1}{4}$ to $\frac{9}{32}$	3.38
T-39	$1\frac{3}{4}$	$1\frac{3}{4}$	$\frac{1}{4}$ to $\frac{9}{32}$	$\frac{1}{4}$ to $\frac{9}{32}$	2.93
T-40	$1\frac{3}{4}$	$1\frac{3}{4}$	$\frac{3}{16}$ to $\frac{7}{32}$	$\frac{3}{16}$ to $\frac{7}{32}$	2.28
T-45	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{4}$ to $\frac{9}{32}$	$\frac{1}{4}$ to $\frac{9}{32}$	2.47
T-46	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{16}$ to $\frac{7}{32}$	$\frac{3}{16}$ to $\frac{7}{32}$	1.94
T-51	$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{1}{4}$ to $\frac{9}{32}$	$\frac{1}{4}$ to $\frac{9}{32}$	2.02
T-52	$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{3}{16}$ to $\frac{7}{32}$	$\frac{3}{16}$ to $\frac{7}{32}$	1.59
T-57	1	1	$\frac{3}{16}$ to $\frac{7}{32}$	$\frac{3}{16}$ to $\frac{7}{32}$	1.25
T-58	1	1	$\frac{1}{8}$ to $\frac{5}{32}$	$\frac{1}{8}$ to $\frac{5}{32}$	.89
T-59	1	1	$\frac{1}{8}$	$\frac{7}{64}$ to $\frac{1}{8}$	.78

NOTE.—The maximum length in which we can furnish tees is 35 feet. In ordering extreme lengths a leeway of five feet will facilitate the execution of orders.

## TEES WITH UNEQUAL LEGS



NOTE.—T-69 and T-74 made only by special arrangement.  
Table on page 64.

## TEES WITH UNEQUAL LEGS

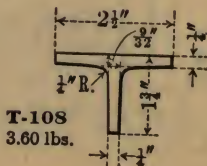
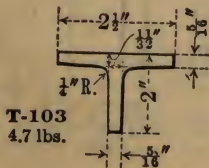
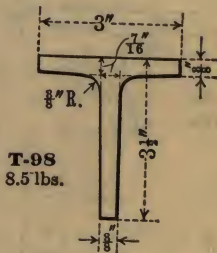
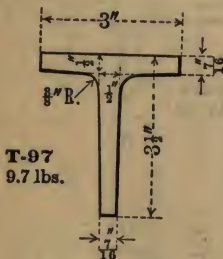
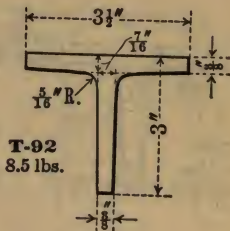
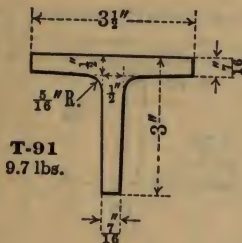


Table on page 64.

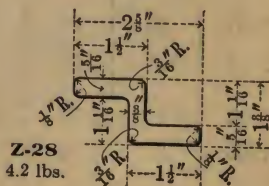
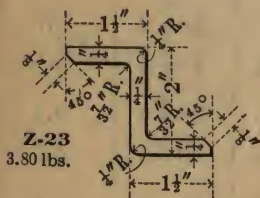
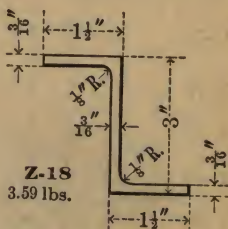
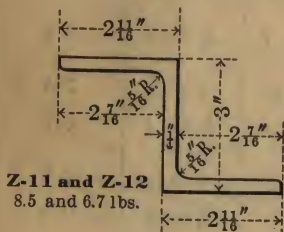
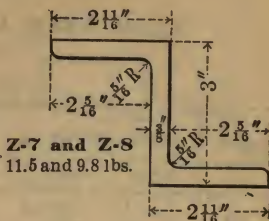
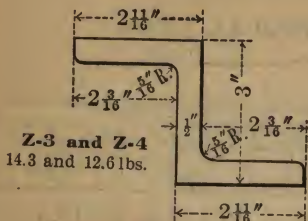
## TEES WITH UNEQUAL LEGS

Section Index	SIZE, INCHES		THICKNESS OF METAL, INCHES		Weight per Foot, Pounds
	Table	Stem	Table	Stem	
*T-69	5	2½	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{7}{16}$ to $\frac{3}{4}$	10.9
*T-74	4½	3	$\frac{5}{16}$ to $\frac{3}{8}$	$\frac{5}{16}$ to $\frac{3}{8}$	8.4
T-79	4	2	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{3}{8}$ to $\frac{7}{16}$	7.8
T-80	4	2	$\frac{5}{16}$ to $\frac{3}{8}$	$\frac{5}{16}$ to $\frac{3}{8}$	6.7
T-85	3½	4	$\frac{1}{2}$ to $\frac{9}{16}$	$\frac{1}{2}$ to $\frac{9}{16}$	12.6
T-86	3½	4	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{3}{8}$ to $\frac{7}{16}$	9.8
T-91	3½	3	$\frac{7}{16}$ to $\frac{1}{2}$	$\frac{7}{16}$ to $\frac{1}{2}$	9.7
T-92	3½	3	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{3}{8}$ to $\frac{7}{16}$	8.5
T-97	3	3½	$\frac{7}{16}$ to $\frac{1}{2}$	$\frac{7}{16}$ to $\frac{1}{2}$	9.7
T-98	3	3½	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{3}{8}$ to $\frac{7}{16}$	8.5
T-103	2½	2	$\frac{5}{16}$ to $\frac{1}{2}$	$\frac{5}{16}$ to $\frac{1}{2}$	4.7
T-108	2½	1½	$\frac{1}{4}$ to $\frac{9}{32}$	$\frac{1}{4}$ to $\frac{9}{32}$	3.60

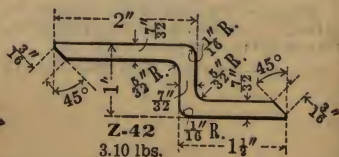
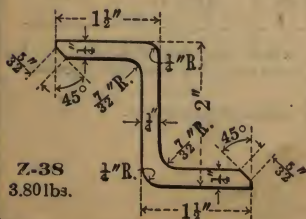
NOTE.—The maximum length in which we can furnish tees is 35 feet. In ordering extreme lengths a leeway of five feet will facilitate the execution of orders.

\*NOTE.—T-69 and T-74 made only by special arrangement.

## HOT ROLLED Z-BARS



## COLD ROLLED HARVESTER Z-BARS





**HOT ROLLED Z-BARS**

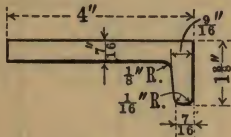
Section Index	SIZE, INCHES			Thickness of Metal, Inches	Weight per Foot, Pounds
	Flange	Web	Flange		
Z- 3	2 $\frac{3}{4}$	3 $\frac{1}{16}$	2 $\frac{3}{4}$	$\frac{9}{16}$	14.3
Z- 4	2 $\frac{11}{16}$	3	2 $\frac{11}{16}$	$\frac{1}{2}$	12.6
Z- 7	2 $\frac{3}{4}$	3 $\frac{1}{16}$	2 $\frac{3}{4}$	$\frac{7}{16}$	11.5
Z- 8	2 $\frac{11}{16}$	3	2 $\frac{11}{16}$	$\frac{3}{8}$	9.8
Z-11	2 $\frac{3}{4}$	3 $\frac{1}{16}$	2 $\frac{3}{4}$	$\frac{5}{16}$	8.5
Z-12	2 $\frac{11}{16}$	3	2 $\frac{11}{16}$	$\frac{1}{4}$	6.7
Z-18	1 $\frac{1}{2}$	3	1 $\frac{1}{2}$	$\frac{3}{16}$	3.59
Z-23	1 $\frac{1}{2}$	2	1 $\frac{1}{2}$	$\frac{1}{4}$	3.80
Z-28	1 $\frac{1}{2}$	1 $\frac{3}{8}$	1 $\frac{1}{2}$	$\frac{3}{8} \times \frac{5}{16}$	4.2

**COLD ROLLED HARVESTER Z-BARS**

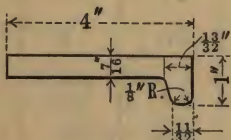
Section Index	SIZE, INCHES			Thickness of Metal, Inches	Weight per Foot, Pounds
	Flange	Web	Flange		
Z-38	1 $\frac{1}{2}$	2	1 $\frac{1}{2}$	$\frac{1}{4}$	3.80
Z-42	2	1	1 $\frac{1}{2}$	$\frac{7}{32}$	3.10

## DROPPER BARS

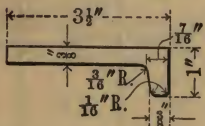
**D-3**  
7.6 lbs.



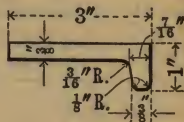
**D-6**  
6.7 lbs.



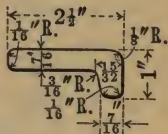
**D-9**  
5.4 lbs.



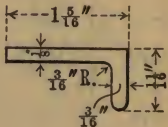
**D-15**  
4.7 lbs.



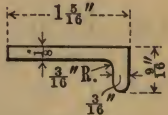
**D-18**  
4.6 lbs.



**D-21**  
0.92 lbs.

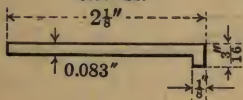


**D-24**  
0.84 lbs.

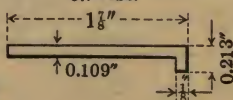


## WEARING PLATES

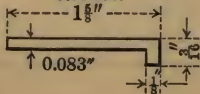
**V-3**  
0.65 lbs.



**V-5**  
0.74 lbs.



**V-7**  
0.50 lbs.



**DROPPER BARS**

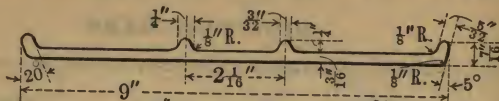
Section Index	Size, Inches	Weight per Foot, Pounds
D- 3	4 x $1\frac{3}{8}$	7.6
D- 6	4 x 1	6.7
D- 9	$3\frac{1}{2}$ x 1	5.4
D-15	3 x 1	4.7
D-18	$2\frac{1}{2}$ x 1	4.6
D-21	$1\frac{5}{16}$ x $\frac{11}{16}$	.92
D-24	$1\frac{5}{16}$ x $\frac{9}{16}$	.84

**WEARING PLATES**

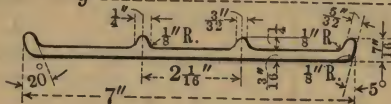
Section Index	Size, Inches	Weight per Foot, Pounds
V-3	$2\frac{1}{8}$ x $\frac{3}{16}$	.65
V-5	$1\frac{7}{8}$ x .213	.74
V-7	$1\frac{5}{8}$ x $\frac{3}{16}$	.50

# BEADED AND RIBBED HARVESTER TIRES

**H-3**  
6.3 lbs.

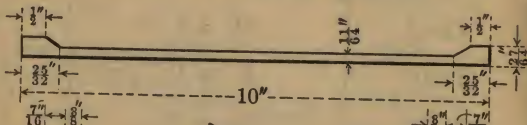


**H-5**  
5.0 lbs.

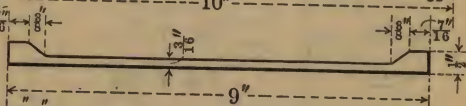


## BEADED HARVESTER TIRES

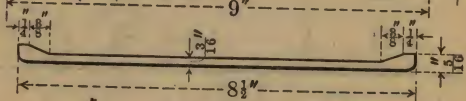
**H-10**  
7.0 lbs.



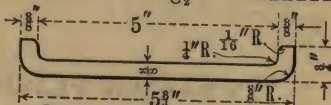
**H-12**  
7.0 lbs.



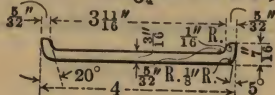
**H-14**  
5.85 lbs.



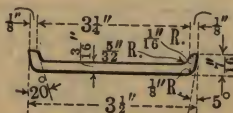
**H-16**  
6.75 lbs.



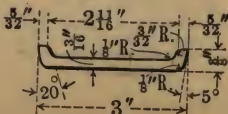
**H-18**  
2.85 lbs.



**H-20**  
2.5 lbs.



**H-22**  
2.0 lbs.



**BEADED AND RIBBED HARVESTER TIRES**

Section Index	Size, Inches	Weight per Foot, Pounds
H-3	$9 \times \frac{7}{16} \times \frac{3}{16}$	6.3
H-5	$7 \times \frac{7}{16} \times \frac{3}{16}$	5.0

**BEADED HARVESTER TIRES**

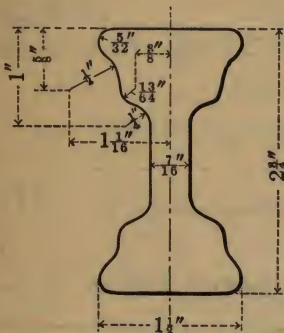
Section Index	Size, Inches	Weight per Foot, Pounds
H-10	$10 \times \frac{27}{64} \times \frac{11}{64}$	7.0
H-12	$9 \times \frac{1}{2} \times \frac{3}{16}$	7.0
H-14	$8\frac{1}{2} \times \frac{5}{16} \times \frac{3}{16}$	5.85
H-16	$5\frac{3}{4} \times \frac{3}{4} \times \frac{3}{8}$	6.75
H-18	$4 \times \frac{7}{16} \times \frac{3}{16}$	2.85
H-20	$3\frac{1}{2} \times \frac{7}{16} \times \frac{3}{16}$	2.5
H-22	$3 \times \frac{3}{8} \times \frac{3}{16}$	2.0



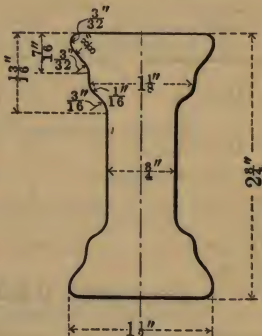
## PLOW BEAMS

**B-160 to B-163**

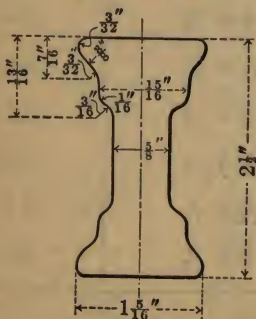
13.2 to 8.5 lbs.

**B-173, B-174**

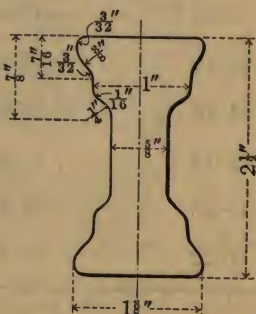
11.7 and 9.4 lbs.

**B-183, B-184**

8.6 and 7.5 lbs.

**B-188, B-189**

8.9 and 7.8 lbs.



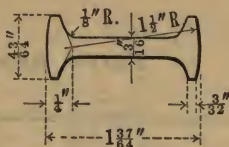
## PLOW BEAMS

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
B-160	$2\frac{3}{4} \times 2$	$\frac{15}{16}$	13.2
B-161	$2\frac{3}{4} \times 1\frac{3}{4}$	$\frac{11}{16}$	10.8
B-162	$2\frac{3}{4} \times 1\frac{5}{8}$	$\frac{9}{16}$	9.7
B-163	$2\frac{3}{4} \times 1\frac{1}{2}$	$\frac{7}{16}$	8.5
B-173	$2\frac{3}{4} \times 1\frac{3}{4}$	1	11.7
B-174	$2\frac{3}{4} \times 1\frac{1}{2}$	$\frac{3}{4}$	9.4
B-183	$2\frac{1}{2} \times 1\frac{7}{16}$	$\frac{3}{4}$	8.6
B-184	$2\frac{1}{2} \times 1\frac{5}{16}$	$\frac{5}{8}$	7.5
B-188	$2\frac{1}{2} \times 1\frac{1}{2}$	$\frac{3}{4}$	8.9
B-189	$2\frac{1}{2} \times 1\frac{3}{8}$	$\frac{5}{8}$	7.8

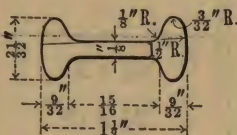
## CULTIVATOR BEAMS

**B-200**

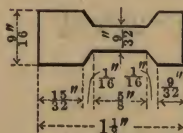
1.50 lbs.

**B-205**

1.40 lbs.

**B-210**

2.23 lbs.

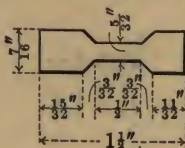
**B-215**

to

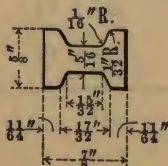
**B-217**

2.32, 2.00 and

1.68 lbs.

**B-225**

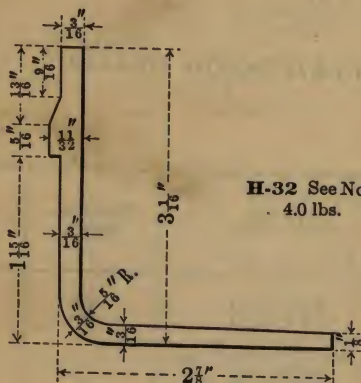
1.33 lbs.



## CULTIVATOR BEAMS

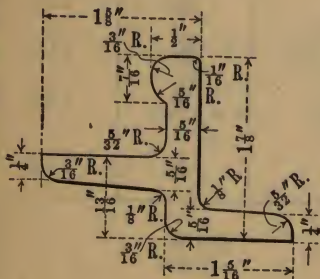
Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
B-200	$1\frac{3}{8} \times \frac{7}{8}$	$\frac{3}{16}$	1.50
B-205	$1\frac{1}{2} \times \frac{21}{32}$	$\frac{1}{8}$	1.40
B-210	$1\frac{1}{2} \times \frac{9}{16}$	$\frac{9}{32}$	2.23
B-215	$1\frac{1}{2} \times \frac{9}{16}$	$\frac{9}{32}$	2.32
B-216	$1\frac{1}{2} \times \frac{1}{2}$	$\frac{7}{32}$	2.00
B-217	$1\frac{1}{2} \times \frac{7}{16}$	$\frac{5}{32}$	1.68
B-225	$\frac{7}{8} \times \frac{5}{8}$	$\frac{5}{16}$	1.33

# REAPER AND HARVESTER FINGER BARS

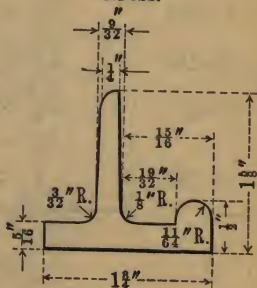


**H-32** See Note  
4.0 lbs.

**H-34** See Note  
4.4 lbs.



**H-36** See Note  
3.1 lbs.



NOTE.—These sections made only by special arrangement.



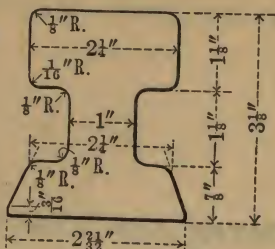
**REAPER AND HARVESTER  
FINGER BARS**

Section Index	Size, Inches	Thickness, Inches	Weight per Foot, Pounds
H-32	$3\frac{1}{16} \times 2\frac{7}{8}$	$\frac{3}{16}$	4.0
H-34	$1\frac{7}{8} \times 1\frac{5}{8} \times 1\frac{5}{16}$	$\frac{5}{16}$	4.4
H-36	$1\frac{3}{4} \times 1\frac{5}{8}$	$\frac{5}{16}$	3.1

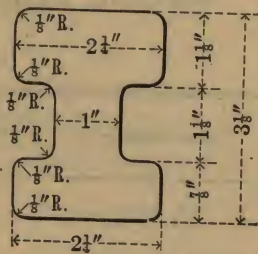
NOTE.—These sections made only by special arrangement.

## RACK RAILS

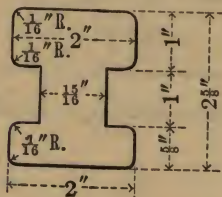
**R-100**  
20.0 lbs.



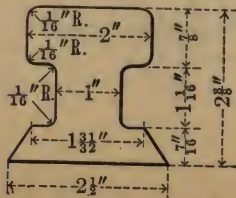
**R-101**  
19.2 lbs.



**R-102**  
14.0 lbs.



**R-103**  
12.5 lbs.

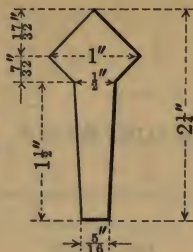


**RACK RAILS**

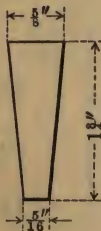
Section Index	Size, Inches	Weight per Foot, Pounds
R-100	$3\frac{1}{8} \times 2\frac{3}{4} \times 2\frac{1}{4}$	20.0
R-101	$3\frac{1}{8} \times 2\frac{1}{4} \times 2\frac{1}{4}$	19.2
R-102	$2\frac{5}{8} \times 2 \times 2$	14.0
R-103	$2\frac{3}{8} \times 2\frac{1}{2} \times 2$	12.5

## SCREEN BARS

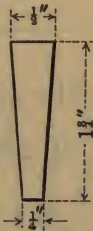
**S-103**  
3.53 lbs.



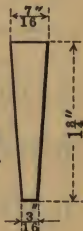
**S-104**  
2.81 lbs.



**S-105**  
2.25 lbs.



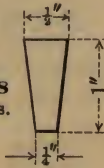
**S-106**  
1.9 lbs.



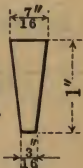
**S-107**  
1.62 lbs.



**S-108**  
1.3 lbs.

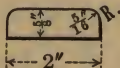


**S-109**  
1.1 lbs.



## CYLINDER LAG

**V-20**  
4.27 lbs.



**V-22**  
3.75 lbs.



**V-24**  
3.83 lbs.



## SCREEN BARS

Section Index	Size, Inches	Weight per Foot, Pounds
S-103	$2\frac{1}{4} \times 1 \times \frac{5}{16}$	3.53
S-104	$1\frac{3}{4} \times \frac{5}{8} \times \frac{5}{16}$	2.81
S-105	$1\frac{3}{4} \times \frac{1}{2} \times \frac{1}{4}$	2.25
S-106	$1\frac{3}{4} \times \frac{7}{16} \times \frac{3}{16}$	1.90
S-107	$1 \times \frac{5}{8} \times \frac{5}{16}$	1.62
S-108	$1 \times \frac{1}{2} \times \frac{1}{4}$	1.30
S-109	$1 \times \frac{7}{16} \times \frac{3}{16}$	1.10

## CYLINDER LAG

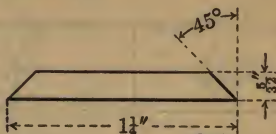
Section Index	Size, Inches	Weight per Foot, Pounds
V-20	$2 \times \frac{5}{8}$	4.27
V-22	$1\frac{3}{4} \times \frac{5}{8}$	3.75
V-24	$1\frac{1}{2} \times \frac{3}{4}$	3.83



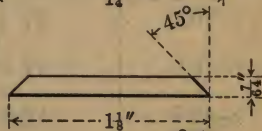
## WAGON BOX BEVEL EDGE

**V-34 to V-37**

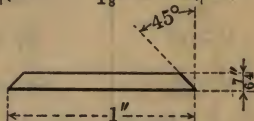
1.39, 1.12, 0.85 and 0.58 lbs.

**V-43 to V-47**

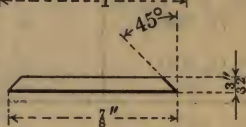
0.86, 0.74, 0.62, 0.50 and 0.38 lbs.

**V-52 to V-56**

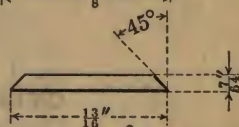
0.77, 0.66, 0.55, 0.44 and 0.33 lbs.

**V-60 to V-64**

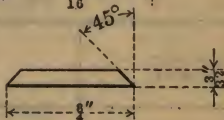
0.62, 0.53, 0.44, 0.35 and 0.26 lbs.

**V-69 to V-73**

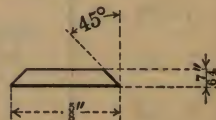
0.62, 0.53, 0.44, 0.35 and 0.26 lbs.

**V-78 to V-82**

0.53, 0.45, 0.37, 0.29 and 0.21 lbs.

**V-88 to V-91**

0.37, 0.31, 0.25 and 0.19 lbs.



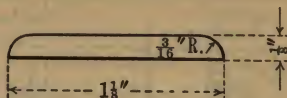
NOTE.—Only lightest sections have sharp corners.

## WAGON BOX BEVEL EDGE

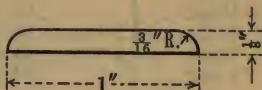
Section Index	Size, Inches	Weight per Foot, Pounds
V-34	1 $\frac{1}{4}$ X $\frac{11}{32}$	1.39
V-35	1 $\frac{1}{4}$ X $\frac{9}{32}$	1.12
V-36	1 $\frac{1}{4}$ X $\frac{7}{32}$	.85
V-37	1 $\frac{1}{4}$ X $\frac{5}{32}$	.58
V-43	1 $\frac{1}{8}$ X $\frac{15}{64}$	.86
V-44	1 $\frac{1}{8}$ X $\frac{13}{64}$	.74
V-45	1 $\frac{1}{8}$ X $\frac{11}{64}$	.62
V-46	1 $\frac{1}{8}$ X $\frac{9}{64}$	.50
V-47	1 $\frac{1}{8}$ X $\frac{7}{64}$	.38
V-52	1 X $\frac{15}{64}$	.77
V-53	1 X $\frac{13}{64}$	.66
V-54	1 X $\frac{11}{64}$	.55
V-55	1 X $\frac{9}{64}$	.44
V-56	1 X $\frac{7}{64}$	.33
V-60	$\frac{7}{8}$ X $\frac{7}{32}$	.62
V-61	$\frac{7}{8}$ X $\frac{3}{16}$	.53
V-62	$\frac{7}{8}$ X $\frac{5}{32}$	.44
V-63	$\frac{7}{8}$ X $\frac{1}{8}$	.35
V-64	$\frac{7}{8}$ X $\frac{3}{32}$	.26
V-69	$\frac{13}{16}$ X $\frac{15}{64}$	.62
V-70	$\frac{13}{16}$ X $\frac{13}{64}$	.53
V-71	$\frac{13}{16}$ X $\frac{11}{64}$	.44
V-72	$\frac{13}{16}$ X $\frac{9}{64}$	.35
V-73	$\frac{13}{16}$ X $\frac{7}{64}$	.26
V-78	$\frac{3}{4}$ X $\frac{7}{32}$	.53
V-79	$\frac{3}{4}$ X $\frac{3}{16}$	.45
V-80	$\frac{3}{4}$ X $\frac{5}{32}$	.37
V-81	$\frac{3}{4}$ X $\frac{1}{8}$	.29
V-82	$\frac{3}{4}$ X $\frac{3}{32}$	.21
V-88	$\frac{5}{8}$ X $\frac{3}{16}$	.37
V-89	$\frac{5}{8}$ X $\frac{5}{32}$	.31
V-90	$\frac{5}{8}$ X $\frac{1}{8}$	.25
V-91	$\frac{5}{8}$ X $\frac{7}{64}$	.19

# OVAL EDGE OR REACH PLATE

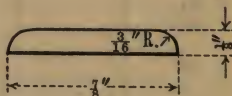
**V-111 to V-114**  
1.15, 0.91, 0.67 and 0.43 lbs.



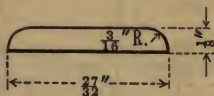
**V-119 to V-122**  
1.02, 0.81, 0.60 and 0.39 lbs.



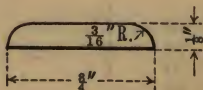
**V-127 to V-130**  
0.91, 0.72, 0.53 and 0.34 lbs.



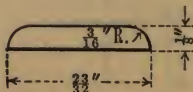
**V-135 to V-138**  
0.86, 0.68, 0.50 and 0.32 lbs.



**V-143 to V-146**  
0.76, 0.60, 0.44 and 0.28 lbs.



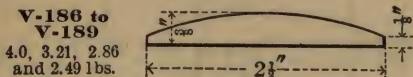
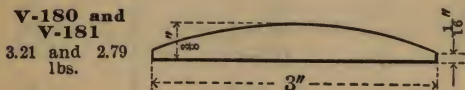
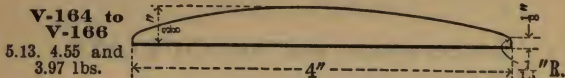
**V-151 to V-154**  
0.72, 0.57, 0.42 and 0.27 lbs.



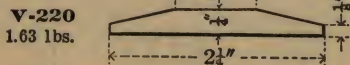
# OVAL EDGE OR REACH PLATE

Section Index	Size, Inches	Weight per Foot, Pounds
V-111	$1\frac{1}{8} \times \frac{5}{16}$	1.15
V-112	$1\frac{1}{8} \times \frac{1}{4}$	.91
V-113	$1\frac{1}{8} \times \frac{3}{16}$	.67
V-114	$1\frac{1}{8} \times \frac{1}{8}$	.43
V-119	$1 \times \frac{5}{16}$	1.02
V-120	$1 \times \frac{1}{4}$	.81
V-121	$1 \times \frac{3}{16}$	.60
V-122	$1 \times \frac{1}{8}$	.39
V-127	$\frac{7}{8} \times \frac{5}{16}$	.91
V-128	$\frac{7}{8} \times \frac{1}{4}$	.72
V-129	$\frac{7}{8} \times \frac{3}{16}$	.53
V-130	$\frac{7}{8} \times \frac{1}{8}$	.34
V-135	$\frac{27}{32} \times \frac{5}{16}$	.86
V-136	$\frac{27}{32} \times \frac{1}{4}$	.68
V-137	$\frac{27}{32} \times \frac{3}{16}$	.50
V-138	$\frac{27}{32} \times \frac{1}{8}$	.32
V-143	$\frac{3}{4} \times \frac{5}{16}$	.76
V-144	$\frac{3}{4} \times \frac{1}{4}$	.60
V-145	$\frac{3}{4} \times \frac{3}{16}$	.44
V-146	$\frac{3}{4} \times \frac{1}{8}$	.28
V-151	$\frac{23}{32} \times \frac{5}{16}$	.72
V-152	$\frac{23}{32} \times \frac{1}{4}$	.57
V-153	$\frac{23}{32} \times \frac{3}{16}$	.42
V-154	$\frac{23}{32} \times \frac{1}{8}$	.27

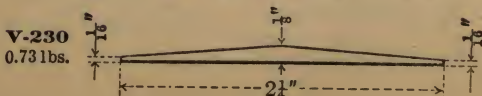
## SPECIAL HALF OVALS



## BEVEL EDGE



## HOE POINT





**SPECIAL HALF OVALS**

Section Index	Size, Inches	Weight per Foot, Pounds
V-164	4 x $\frac{1}{2}$ x $\frac{1}{8}$	5.13
V-165	4 x $\frac{7}{16}$ x $\frac{1}{8}$	4.55
V-166	4 x $\frac{3}{8}$ x $\frac{1}{8}$	3.97
V-174	3 $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{1}{8}$	4.50
V-175	3 $\frac{1}{2}$ x $\frac{7}{16}$ x $\frac{1}{8}$	4.00
V-180	3 x $\frac{7}{16}$ x $\frac{1}{16}$	3.21
V-181	3 x $\frac{3}{8}$ x $\frac{1}{16}$	2.79
V-186	2 $\frac{1}{2}$ x $\frac{5}{8}$ x $\frac{1}{8}$	4.00
V-187	2 $\frac{1}{2}$ x $\frac{1}{2}$ x $\frac{1}{8}$	3.21
V-188	2 $\frac{1}{2}$ x $\frac{7}{16}$ x $\frac{1}{8}$	2.86
V-189	2 $\frac{1}{2}$ x $\frac{3}{8}$ x $\frac{1}{8}$	2.49
V-193	2 $\frac{1}{2}$ x $\frac{5}{16}$ x $\frac{1}{16}$	1.77
V-194	2 $\frac{1}{2}$ x $\frac{1}{4}$ x $\frac{3}{32}$	1.52

**BEVEL EDGE**

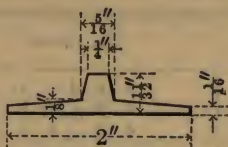
Section Index	Size, Inches	Weight per Foot, Pounds
V-220	2 $\frac{1}{2}$ x $\frac{1}{4}$ x $\frac{1}{8}$	1.63

**HOE POINT**

Section Index	Size, Inches	Weight per Foot, Pounds
V-230	2 $\frac{1}{2}$ x $\frac{1}{8}$ x $\frac{1}{16}$	.73

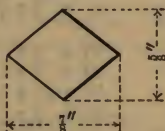
## HEATER BAND

V-235  
0.75 lbs.



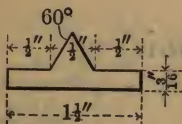
## DIAMOND HARROW TOOTH

V-240  
0.95 lbs.



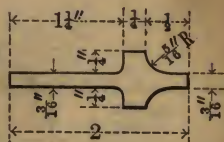
## ICE SLIDE

V-245  
1.34 lbs.



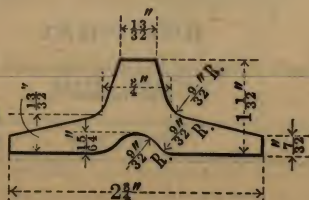
## SASH BAR

V-250  
1.88 lbs.



## SAW MILL TRACK

V-255  
4.25 lbs.



**HEATER BAND**

Section Index	Size, Inches	Weight per Foot, Pounds
V-235	2 x $\frac{11}{32}$	.75

**DIAMOND HARROW TOOTH**

Section Index	Size, Inches	Weight per Foot, Pounds
V-240	$\frac{7}{8}$ x $\frac{5}{8}$	.95

**ICE SLIDE**

Section Index	Size, Inches	Weight per Foot, Pounds
V-245	$1\frac{1}{2}$ x $\frac{3}{16}$	1.34

**SASH BAR**

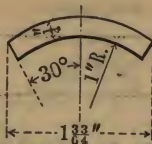
Section Index	Size, Inches	Weight per Foot, Pounds
V-250	2 x $\frac{11}{16}$ x $\frac{3}{16}$	1.88

**SAW MILL TRACK**

Section Index	Size, Inches	Weight per Foot, Pounds
V-255	$2\frac{3}{4}$ x $1\frac{1}{32}$	4.25

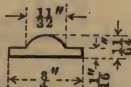
## CURVED SECTION

V-260  
1.28 lbs.



## FLANGED CONVEX

V-265  
0.25 lbs.



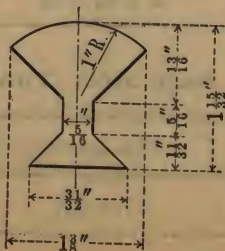
## FLANGED CONCAVE CONVEX

V-270  
0.30 lbs.



## CURB RAIL

V-275  
3.52 lbs.



**CURVED SECTION**

Section Index	Size, Inches	Weight per Foot, Pounds
V-260	$1\frac{3}{8} \times \frac{1}{4} \times 1$ Rad.	1.28

**FLANGED CONVEX**

Section Index	Size, Inches	Weight per Foot, Pounds
V-265	$\frac{3}{4} \times \frac{11}{16} \times \frac{1}{16}$	.25

**FLANGED CONCAVE CONVEX**

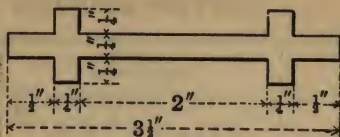
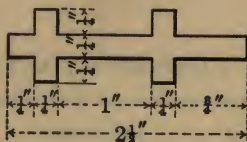
Section Index	Size, Inches	Weight per Foot, Pounds
V-270	$\frac{3}{4} \times \frac{7}{32} \times \frac{7}{16}$	.30

**CURB RAIL**

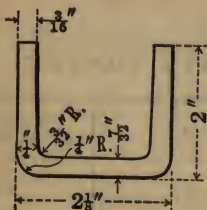
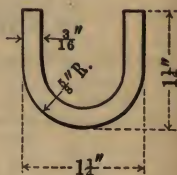
Section Index	Size, Inches	Weight per Foot, Pounds
V-275	$1\frac{15}{32} \times 1\frac{3}{8} \times \frac{5}{16}$	3.52



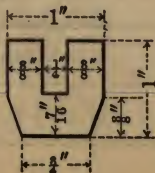
## HANGER BARS

V-280  
3.82 lbs.V-285  
3.0 lbs.

## U BARS

U-3  
4.25 lbs.U-5  
1.86 lbs.

## TANK STIFFENER

V-290  
2.78 lbs.

**HANGER BARS**

Section Index	Size, Inches	Weight per Foot, Pounds
V-280	$3\frac{1}{2} \times \frac{3}{4} \times \frac{1}{4}$	3.82
V-285	$2\frac{1}{2} \times \frac{3}{4} \times \frac{1}{4}$	3.00

**U BARS**

Section Index	Size, Inches	Weight per Foot, Pounds
U-3	$2\frac{1}{8} \times 2 \times \frac{7}{32}$	4.25
U-5	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{16}$	1.86

**TANK STIFFENER**

Section Index	Size, Inches	Weight per Foot, Pounds
V-290	$1 \times 1 \times \frac{3}{4}$	2.78

## COLD-TWISTED SQUARE CONCRETE BARS

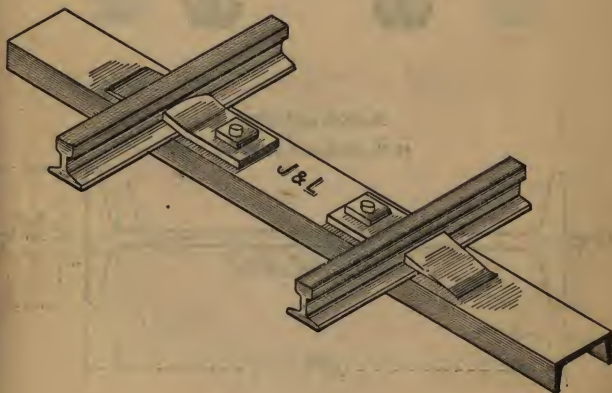
Unless otherwise specified, cold-twisted bars will conform with Manufacturers' Standard Specifications.



Size, Inches	Area, Square Inches	Weight per Foot, Pounds
$\frac{1}{4}$	.0625	.212
$\frac{5}{16}$	.0977	.332
$\frac{3}{8}$	.1406	.478
$\frac{7}{16}$	.1914	.651
$\frac{1}{2}$	.2500	.850
$\frac{9}{16}$	.3164	1.076
$\frac{5}{8}$	.3906	1.328
$\frac{11}{16}$	.4727	1.607
$\frac{3}{4}$	.5625	1.913
$\frac{13}{16}$	.6602	2.245
$\frac{7}{8}$	.7656	2.603
$\frac{15}{16}$	.8789	2.988
1	1.0000	3.400
$1\frac{1}{8}$	1.2656	4.303
$1\frac{1}{4}$	1.5625	5.312
$1\frac{3}{8}$	1.8906	6.428
$1\frac{1}{2}$	2.2500	7.650

NOTE.—All intermediate sizes can be furnished. For weights, see table of squares, pages 147 to 151. Write for circular.

## STEEL MINE TIES



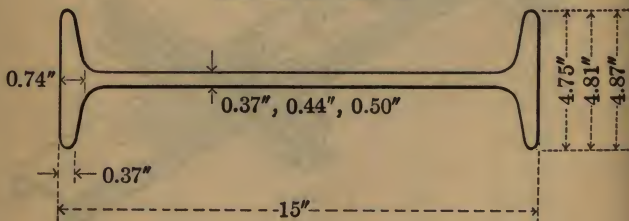
NOTE.—These ties can be furnished in any sizes of standard Channels and for any gauge.

**STEEL SHEET PILING**

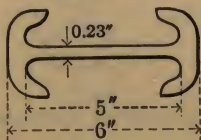
Patent No. 901241

**B-300 to B-302**

42.25, 39.0 and 35.75 lbs.

**B-316**

12.25 lbs.



NOTE.—We invite inquiry concerning Sheet Piling. Write for catalogue.



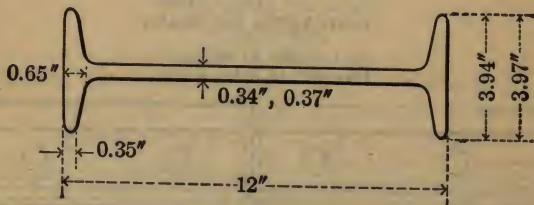
# STEEL SHEET PILING

Patent No. 901241



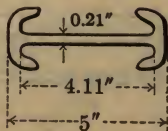
**B-309, B-310**

27.6 and 26.3 lbs.



**B-321**

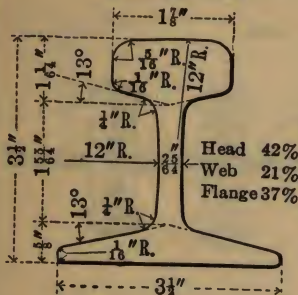
9.75 lbs.



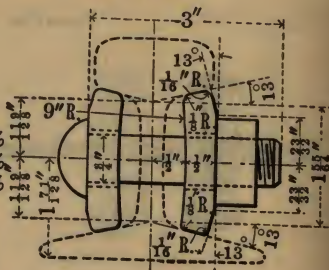
NOTE.—We invite inquiry concerning Sheet Piling. Write for catalogue.

## STEEL RAILS AND CONNECTIONS

**Section R-40**  
40 pounds per yard



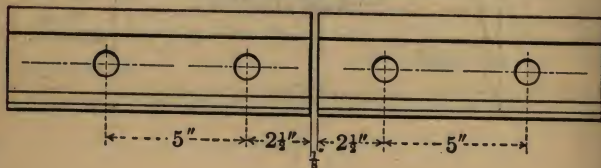
**Splice Bar Section S-40**  
For 40-pound rail



62.86 gross tons of rails per mile of single track.  
84 feet of single track per gross ton of rails.

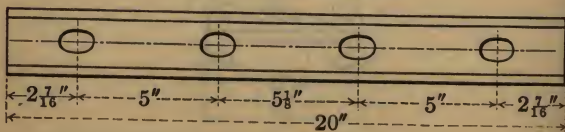
### DRILLING OF RAIL

Center of web.  
Diameter of holes  $\frac{3}{8}$  inch.



### PUNCHING OF SPLICE BAR

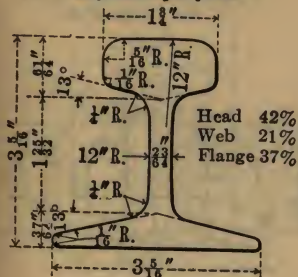
Elliptical holes,  $1\frac{1}{4} \times 1\frac{1}{8}$  inch.



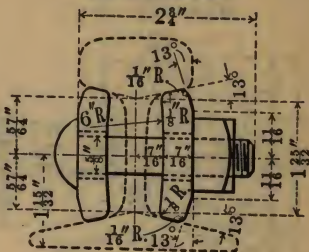
Approximate weight of complete joint 14.90 pounds.  
Bolts  $3 \times \frac{3}{4}$  inch, square nut. Spikes  $5 \times \frac{9}{16}$  or  $5 \times \frac{1}{2}$  inch.

# STEEL RAILS AND CONNECTIONS

**Section R-35**  
35 pounds per yard



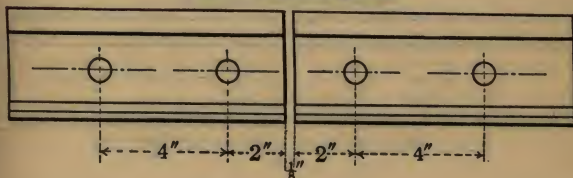
**Splice Bar Section S-35**  
For 35-pound rail



55 gross tons of rails per mile of single track.  
96 feet of single track per gross ton of rails.

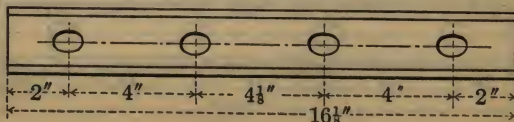
## DRILLING OF RAIL

Center of web.  
Diameter of holes  $\frac{3}{4}$  inch.



## PUNCHING OF SPLICE BAR

Elliptical holes,  $\frac{3}{4} \times \frac{1}{2}$  inch.

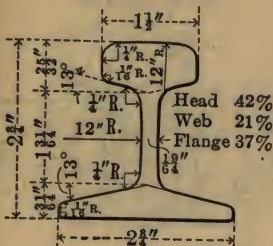


Approximate weight of complete joint 9.42 pounds.  
Bolts  $2\frac{3}{4} \times \frac{5}{8}$  inch, square nut. Spikes  $4\frac{1}{2} \times \frac{1}{2}$  inch.

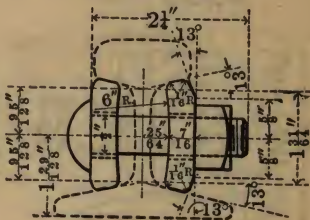


## STEEL RAILS AND CONNECTIONS

**Section R-25**  
25 pounds per yard



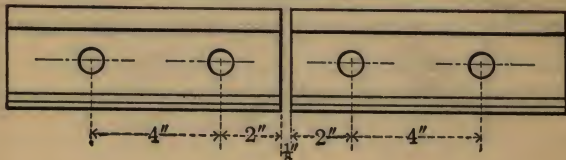
**Splice Bar Section S-25**  
For 25-pound rail



39.29 gross tons per mile of single track.  
134.4 feet of single track per gross ton of rails.

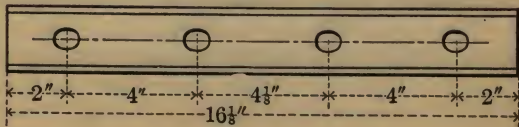
## DRILLING OF RAIL

Center of web.  
Diameter of holes  $\frac{5}{8}$  inch.



### PUNCHING OF SPLICE BAR

Elliptical holes,  $\frac{3}{4} \times \frac{1}{8}$  inch.



Approximate weight of complete joint 8.35 pounds.  
Bolts  $2\frac{1}{4} \times \frac{1}{2}$  inch, square nut. Spikes  $4 \times \frac{1}{2}$  inch.

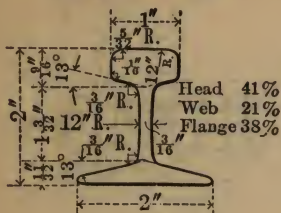




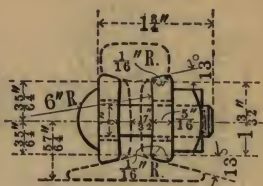


## STEEL RAILS AND CONNECTIONS

**Section R-12**  
12 pounds per yard



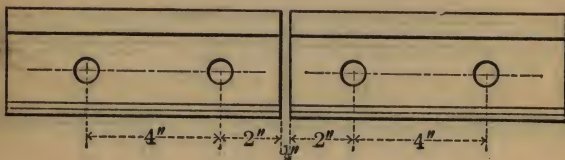
**Splice Bar Section S-12**  
For 12-pound rail



18.86 gross tons of rails per mile of single track.  
280 feet of single track per gross ton of rails.

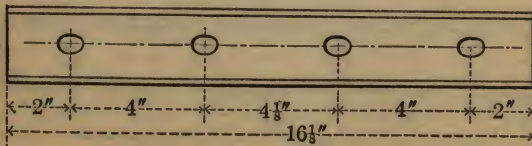
### DRILLING OF RAIL

Center of web.  
Diameter of holes  $\frac{5}{8}$  inch.



### PUNCHING OF SPLICE BAR

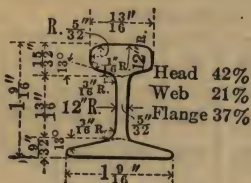
Elliptical holes,  $\frac{3}{4} \times \frac{1}{8}$  inch.



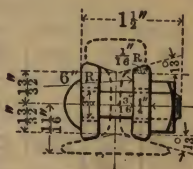
Approximate weight of complete joint 4.31 pounds.  
Bolts  $1\frac{1}{4} \times \frac{1}{2}$  inch, square nut. Spikes  $3 \times \frac{1}{2}$  inch.

## STEEL RAILS AND CONNECTIONS

**Section R-8**  
8 pounds per yard



**Splice Bar Section S-8**  
For 8-pound rail

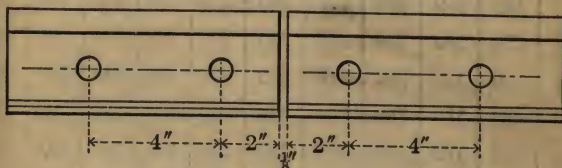


12.57 gross tons per mile of single track.  
420 feet of single track per gross ton of rails.

## DRILLING OF RAIL

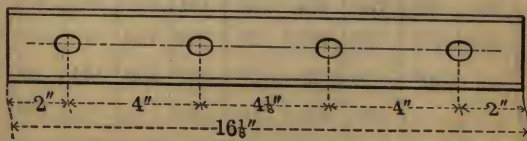
Center of web.

Diameter of holes  $\frac{1}{2}$  inch.



## PUNCHING OF SPLICE BAR

Elliptical holes,  $\frac{1}{2} \times \frac{7}{16}$  inch.



Approximate weight of complete joint 3.16 pounds.  
Bolts  $1\frac{1}{2} \times \frac{3}{8}$  inch, square nut. Spikes  $2\frac{1}{2} \times \frac{5}{16}$  inch.

## SHEARED STEEL PLATES

LENGTHS OF RECTANGULAR PLATES ROLLED ON  
108-INCH MILL

Thickness Inches	WIDTH OF PLATES, INCHES									
	102	98	94	90	88	84	80	76	72	68
$\frac{1}{4}$				*192	192	216	228	240	252	264
$\frac{5}{16}$		240	240	252	264	264	276	282	300	340
$\frac{3}{8}$	168	180	192	240	240	252	264	300	340	360
$\frac{7}{16}$	174	180	198	240	252	264	276	300	340	360
$\frac{1}{2}$	180	192	228	240	252	288	312	340	360	360
$\frac{9}{16}$	180	198	216	240	252	300	324	340	360	360
$\frac{5}{8}$	180	198	216	240	252	300	324	340	360	360
$1\frac{1}{16}$	180	192	204	216	240	276	300	340	360	360
$\frac{3}{4}$	180	192	204	216	240	276	300	340	360	360
$1\frac{3}{16}$	180	192	204	216	240	276	300	340	360	360
$\frac{7}{8}$	180	180	192	204	216	240	276	288	300	324
1	180	180	180	192	192	216	216	240	264	276
$1\frac{1}{4}$	156	156	156	168	180	192	192	204	216	216
$1\frac{3}{8}$	132	132	144	144	156	168	168	180	192	204
$1\frac{1}{2}$	132	132	132	144	144	156	156	168	180	180
$1\frac{5}{8}$	120	120	120	132	132	144	156	156	168	168
$1\frac{3}{4}$	108	108	108	120	120	132	132	144	144	156
$1\frac{7}{8}$		108	108	120	120	132	132	144	144	144
2			96	108	114	120	126	132	138	144

Plates of greater width than shown in this table may be submitted for special consideration.

\*Plates 192" x 90" x  $\frac{1}{4}$ " rolled by special arrangement.



## SHEARED STEEL PLATES

LENGTHS OF RECTANGULAR PLATES ROLLED ON  
108-INCH MILL

Thickness Inches	WIDTH OF PLATES, INCHES								
	64	60	56	52	48	44	40	36	24
$\frac{1}{4}$	288	300	300	312	336	348	360	360	360
$\frac{5}{16}$	360	360	360	360	360	360	360	360	360
$\frac{3}{8}$	360	360	360	360	360	360	360	360	360
$\frac{7}{16}$	360	360	360	360	360	360	360	360	360
$\frac{1}{2}$	360	360	360	360	360	360	360	360	360
$\frac{9}{16}$	360	360	360	360	360	360	360	360	360
$\frac{5}{8}$	360	360	360	360	360	360	360	360	360
$1\frac{1}{16}$	360	360	360	360	360	360	360	360	360
$\frac{3}{4}$	360	360	360	360	360	360	360	360	360
$1\frac{3}{16}$	360	360	360	360	360	360	360	360	360
$\frac{7}{8}$	340	360	360	360	360	360	360	360	360
1	288	300	324	340	360	360	360	360	360
$1\frac{1}{4}$	228	240	252	264	300	300	300	300	300
$1\frac{3}{8}$	216	228	240	252	300	300	300	300	300
$1\frac{1}{2}$	192	204	216	228	240	252	252	264	240
$1\frac{5}{8}$	180	192	204	228	240	252	252	252	240
$1\frac{3}{4}$	156	168	174	180	204	228	240	240	204
$1\frac{7}{8}$	156	156	168	180	204	216	216	216	204
2	150	156	162	168	192	192	192	192	192

Plates of greater width than shown in this table may be submitted for special consideration.

**SHEARED STEEL PLATES****LENGTHS OF RECTANGULAR PLATES ROLLED ON  
78-INCH MILL**

Thickness	WIDTH OF PLATE, INCHES					
	72	66	60	56	52	48
No. 11, U. S. Std. Gauge...			144	168	180	192
No. 10, Birmingham Gauge		120	168	180	192	204
No. 9, " "		120	168	180	192	204
No. 8, " "		120	168	180	192	216
$\frac{1}{8}$ -inch .....	120	120	192	204	216	228
$\frac{3}{32}$ and $\frac{1}{4}$ -inch .....		120	192	204	216	228
$\frac{1}{4}$ -inch .....		108	144	156	168	180
$\frac{3}{8}$ -inch .....		96	120	144	156	180

Thickness	WIDTH OF PLATE, INCHES					
	44	40	36	32	28	24
No. 11, U. S. Std. Gauge...	204	216	228	240	252	264
No. 10, Birmingham Gauge	216	228	240	252	264	276
No. 9, " "	216	228	240	252	264	276
No. 8, " "	228	240	252	264	276	288
$\frac{3}{16}$ -inch .....	240	264	288	300	300	300
$\frac{7}{32}$ and $\frac{1}{4}$ -inch .....	240	252	264	276	288	300
$\frac{1}{2}$ -inch .....	192	204	216	264	300	300
$\frac{3}{8}$ inch .....	192	216	240	252	264	276

Plates of greater width than shown in this table may be submitted for special consideration.

**CIRCULAR PLATES**

Thickness, Inches	Maximum Diameter, Inches	Thickness, Inches	Maximum Diameter, Inches
$\frac{1}{8}$	65	$\frac{9}{16}$	103
$\frac{3}{16}$	65	$\frac{5}{8}$	103
$\frac{1}{4}$	90	$\frac{11}{16}$	103
$\frac{5}{16}$	100	$\frac{3}{4}$	103
$\frac{3}{8}$	103	up to	
$\frac{7}{16}$	103	$1\frac{1}{2}$	
$\frac{1}{2}$	103		

All our plates are accurately straightened by the most improved straightening methods known.

## UNIVERSAL MILL PLATES

SIZES, WITH MAXIMUM LENGTHS IN FEET

Thickness, Inches	WIDTH, INCHES				
	14-17 Inclusive	18-21 Inclusive	22	23-23½ Inclusive	
¼	85	85	85	85	
⅝	85	85	85	85	
⅜	85	85	85	85	
7/16	85	85	85	85	
½	85	85	85	85	
9/16	85	85	85	85	
5/8	85	85	85	85	
11/16	85	85	85	85	
¾	85	85	85	85	
13/16	85	85	85	85	
7/8	85	85	85	85	
15/16	85	85	85	85	
1	85	85	85	85	
1 1/8	92	92	87	84	
1 ¼	92	92	87	84	
1 ⅜	76	76	73	70	
1 ½	76	76	73	70	
1 ⅝	65	65	62	60	
1 ¾	65	65	62	60	
1 7/8	58	56	55	52	
2	58	56	55	52	

NOTE.—For intermediate widths not shown in above table, use length of next greater width.

## WEIGHTS OF CIRCULAR STEEL PLATES

Diameter Inches	THICKNESS, INCHES										
	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$
16	7	11	14	18	21	25	28				
17	8	12	16	20	24	28	32				
18	9	14	18	23	27	32	36				
19	10	15	20	25	30	35	40				
20	11	17	22	28	33	39	45				
21	12	19	25	31	37	43	50				
22	14	20	27	34	40	47	54				
23	15	22	30	37	44	52	59				
24	16	24	32	40	48	56	64				
25	18	26	35	44	52	61	70				
26	19	28	38	47	57	66	75				
27	20	31	41	51	61	71	81				
28	22	33	44	55	66	76	87				
29	24	35	47	59	70	82	94				
30	25	38	50	63	75	88	100				
31	27	40	54	67	80	94	107				
32	29	43	57	71	86	100	114				
33	31	46	61	76	91	106	121				
34	32	48	64	81	97	113	129				
35	34	51	68	85	102	119	136				
36	36	54	72	90	108	126	144	162	180	198	216
37	38	57	76	95	114	133	152	171	190	210	229
38	40	60	80	100	121	141	161	181	201	221	241
39	42	64	85	106	127	148	169	190	212	233	254
40	45	67	89	111	134	156	178	200	223	245	267
41	47	70	94	117	140	164	187	210	234	257	281
42	49	74	98	123	147	172	196	221	245	270	294
43	52	77	103	129	154	180	206	232	257	283	309
44	54	81	108	135	162	189	215	242	269	296	323
45	56	85	113	141	169	197	225	254	282	310	338
46	59	88	118	147	167	206	236	265	294	324	353
47	62	92	123	154	184	215	246	277	307	338	369
48	64	96	128	160	192	224	256	288	320	353	385
49	67	100	134	167	200	234	267	301	334	367	401
50		104	139	174	209	243	278	313	348	383	417
51		109	145	181	217	253	289	326	362	398	434
52		113	150	188	226	263	301	339	376	414	451
53		117	156	195	234	274	313	352	391	430	469
54		122	162	203	243	284	325	365	406	446	487
55		126	168	210	252	295	337	379	421	463	505
56		131	175	218	262	305	349	393	436	480	524
57		136	181	226	271	317	362	407	452	497	542
58		141	187	234	281	328	375	421	468	515	562
59		145	194	242	291	339	388	436	484	533	581
60			201	251	301	351	401	451	501	551	601
61			207	259	311	363	414	466	518	570	621
62			214	268	321	375	428	482	535	588	642
63			221	276	332	387	442	497	552	608	663
64			228	285	342	399	456	513	570	627	684
65			235	294	353	412	470	529	588	647	705



## WEIGHTS OF CIRCULAR STEEL PLATES

(Continued)

Diameter Inches	THICKNESS, INCHES											
	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1 1/8	1 1/4	1 3/8	1 1/2
66	243	303	364	424	485	546	606	667	727			
67	250	312	375	437	500	562	625	687	750			
68	258	322	386	450	515	579	643	708	772			
69	265	331	398	464	530	596	662	729	795			
70	273	341	409	477	546	614	682	750	818			
71	281	351	421	491	561	631	702	772	842			
72	289	361	433	505	577	649	721	794	866			
73	297	371	445	519	593	667	741	816	890			
74	305	381	457	533	610	686	762	838	914			
75	313	391	470	548	626	705	783	861	939			
76	322	402	482	563	643	723	804	884	964	1045	1125	1205
77	330	413	495	578	660	743	825	907	990	1072	1155	1237
78	339	423	508	593	677	762	847	931	1016	1100	1185	1270
79	348	434	521	608	695	782	868	955	1042	1129	1216	1302
80	356	445	534	623	712	802	891	980	1069	1158	1247	1336
81	365	457	548	639	730	822	913	1004	1095	1187	1278	1369
82	374	468	561	655	748	842	936	1029	1123	1216	1310	1403
83	384	479	575	671	767	863	960	1054	1150	1246	1342	1438
84	393	491	589	687	785	884	982	1080	1178	1276	1374	1472
85	402	503	603	704	804	905	1005	1106	1206	1307	1407	1509
86	412	515	618	720	823	926	1029	1132	1235	1338	1441	1543
87	421	527	632	737	843	948	1053	1158	1264	1369	1474	1580
88	431	539	647	754	862	970	1077	1185	1293	1400	1508	1616
89	441	551	662	772	882	992	1102	1212	1323	1433	1543	1653
90	451	564	676	789	902	1014	1127	1240	1352	1465	1577	1690
91		576	691	807	922	1037	1152	1267	1382	1498	1613	1728
92		589	707	824	942	1060	1178	1295	1413	1531	1648	1766
93		602	722	842	963	1083	1203	1324	1444	1564	1684	1805
94		615	738	861	984	1106	1224	1352	1475	1598	1721	1844
95		628	754	879	1005	1130	1256	1381	1507	1632	1758	1883
96		641	769	897	1025	1154	1282	1410	1538	1666	1795	1923
97		654	785	916	1047	1178	1309	1440	1570	1701	1832	1963
98		668	801	935	1069	1202	1336	1469	1603	1737	1870	2004
99		682	818	954	1091	1227	1363	1500	1636	1772	1908	2045
100		695	835	974	1113	1252	1391	1530	1669	1808	1947	2086
101		709	851	993	1135	1277	1419	1561	1703	1844	1986	2128
102		724	868	1013	1158	1302	1447	1592	1736	1881	2026	2171
103		738	885	1033	1180	1328	1476	1623	1771	1918	2066	2213
104		752	903	1053	1203	1354	1504	1655	1805	1956	2106	2257
105		767	920	1073	1227	1380	1533	1687	1840	1993	2147	2300
106		781	938	1094	1250	1407	1563	1719	1875	2032	2188	2344
107		796	955	1115	1274	1433	1592	1752	1911	2070	2229	2389
108		811	973	1136	1298	1460	1622	1785	1947	2109	2271	2433
109		826	992	1157	1322	1487	1652	1818	1983	2148	2313	2479
110		841	1010	1178	1346	1515	1683	1851	2020	2188	2356	2524
111		857	1028	1200	1371	1542	1714	1885	2056	2228	2400	2570
112		872	1047	1221	1396	1570	1745	1919	2094	2268	2443	2617
113		888	1065	1243	1420	1598	1776	1953	2131	2308	2486	2663
114		904	1085	1266	1446	1627	1808	1989	2170	2350	2531	2712
115		920	1104	1288	1471	1656	1839	2024	2208	2392	2575	2759



# WEIGHTS OF ROLLED STEEL PLATES

## PER LINEAL FOOT

Thickness Inches	WIDTH, INCHES								
	13	14	15	16	17	18	19	20	21
$\frac{3}{16}$	8.28	8.92	9.56	10.20	10.84	11.48	12.10	12.76	13.40
$\frac{1}{4}$	11.06	11.90	12.75	13.60	14.44	15.30	16.16	17.00	17.84
$\frac{5}{16}$	13.81	14.88	15.94	17.00	18.06	19.12	20.20	21.24	22.32
$\frac{3}{8}$	16.58	17.86	19.14	20.40	21.68	22.96	24.24	25.50	26.78
$\frac{7}{16}$	19.34	20.82	22.32	23.80	25.28	26.79	28.28	29.75	31.24
$\frac{1}{2}$	22.10	23.80	25.50	27.20	28.89	30.60	32.31	34.00	35.70
$\frac{9}{16}$	24.86	26.78	28.70	30.60	32.52	34.44	36.34	38.27	40.16
$\frac{5}{8}$	27.62	29.74	31.88	34.00	36.12	38.25	40.37	42.50	44.64
$\frac{11}{16}$	30.39	32.72	35.06	37.40	39.72	42.08	44.42	46.74	49.08
$\frac{3}{4}$	33.16	35.71	38.26	40.80	43.36	45.92	48.46	51.00	53.56
$\frac{13}{16}$	35.91	38.67	41.43	44.20	46.96	49.72	52.48	55.25	58.01
$\frac{7}{8}$	38.68	41.65	44.62	47.60	50.60	53.56	56.52	59.50	62.49
$\frac{15}{16}$	41.44	44.63	47.82	51.00	54.20	57.38	60.57	63.76	66.96
1	44.20	47.60	51.00	54.40	57.80	61.20	64.60	68.00	71.40
$1\frac{1}{16}$	46.96	50.57	54.20	57.80	61.40	65.02	68.64	72.25	75.85
$1\frac{1}{8}$	49.72	53.55	57.37	61.20	65.04	68.85	72.68	76.50	80.33
$1\frac{3}{16}$	52.48	56.52	60.56	64.60	68.64	72.68	76.72	80.75	84.79
$1\frac{1}{4}$	55.25	59.50	63.76	68.00	72.26	76.50	80.74	85.00	89.26
$1\frac{5}{16}$	58.02	62.47	66.95	71.40	75.86	80.33	84.80	89.28	93.72
$1\frac{3}{8}$	60.77	65.45	70.12	74.80	79.48	84.15	88.83	93.50	98.17
$1\frac{7}{16}$	63.54	68.42	73.32	78.20	83.08	88.00	92.88	97.75	102.65
$1\frac{1}{2}$	66.30	71.40	76.51	81.60	86.70	91.80	96.90	102.00	107.10
$1\frac{9}{16}$	69.06	74.38	79.69	85.00	90.31	95.63	100.94	106.25	111.56
$1\frac{5}{8}$	71.83	77.35	82.88	88.40	93.93	99.45	104.98	110.50	116.03
$1\frac{11}{16}$	74.59	80.33	86.06	91.80	97.54	103.28	109.01	114.75	120.49
$1\frac{3}{4}$	77.35	83.30	89.25	95.20	101.15	107.10	113.05	119.00	124.95
$1\frac{13}{16}$	80.11	86.28	92.44	98.60	104.76	110.93	117.09	123.25	129.41
$1\frac{7}{8}$	82.88	89.25	95.63	102.00	108.38	114.75	121.13	127.50	133.83
$1\frac{15}{16}$	85.64	92.23	98.81	105.40	111.99	118.58	125.16	131.75	138.34
2	88.40	95.20	102.00	108.80	115.60	122.40	129.20	136.00	142.80

# **WEIGHTS OF ROLLED STEEL PLATES** **PER LINEAL FOOT**

Thickness Inches	WIDTH, INCHES								
	22	23	24	25	26	27	28	29	30
$\frac{3}{16}$	14.04	14.64	15.32	15.96	16.56	17.20	17.84	18.48	19.12
$\frac{1}{4}$	18.69	19.56	20.40	21.26	22.12	22.96	23.80	24.64	25.50
$\frac{5}{16}$	23.36	24.44	25.52	26.56	27.62	28.68	29.76	30.80	31.88
$\frac{3}{8}$	28.06	29.33	30.60	31.88	33.16	34.44	35.72	37.00	38.28
$\frac{7}{16}$	32.72	34.24	35.72	37.20	38.68	40.17	41.65	43.14	44.64
$\frac{1}{2}$	37.40	39.10	40.80	42.50	44.20	45.92	47.60	49.28	51.00
$\frac{9}{16}$	42.04	44.00	45.92	47.80	49.73	51.64	53.56	55.48	57.40
$\frac{5}{8}$	46.76	48.88	51.00	53.12	55.24	57.37	59.49	61.60	63.76
$\frac{11}{16}$	51.40	53.76	56.12	58.44	60.78	63.11	65.44	67.77	70.13
$\frac{3}{4}$	56.10	58.66	61.20	63.76	66.32	68.88	71.42	73.97	76.53
$\frac{13}{16}$	60.79	63.53	66.29	69.06	71.82	74.58	77.34	80.10	82.86
$\frac{7}{8}$	65.44	68.43	71.40	74.38	77.36	80.33	83.30	86.29	89.24
$\frac{15}{16}$	70.13	73.32	76.50	79.68	82.88	86.07	89.26	92.44	95.64
1	74.80	78.20	81.60	85.00	88.40	91.80	95.20	98.60	102.00
$1\frac{1}{16}$	79.48	83.08	86.70	90.32	93.92	97.54	101.14	104.75	108.38
$1\frac{1}{8}$	84.16	88.00	91.80	95.64	99.44	103.26	107.10	110.92	114.74
$1\frac{3}{8}$	88.83	92.88	96.92	100.92	104.96	109.01	113.05	117.09	121.13
$1\frac{1}{2}$	93.52	97.76	102.00	106.24	110.50	114.76	119.00	123.24	127.51
$1\frac{5}{8}$	98.16	102.64	107.12	111.56	116.04	120.50	124.94	129.40	133.89
$1\frac{3}{4}$	102.84	107.52	112.20	116.88	121.54	126.22	130.90	135.58	140.24
$1\frac{7}{8}$	107.52	112.42	117.30	122.20	127.08	131.96	136.84	141.76	146.64
$1\frac{1}{2}$	112.20	117.30	122.40	127.50	132.60	137.72	142.80	147.92	153.02
$1\frac{9}{16}$	116.88	122.19	127.50	132.81	138.13	143.44	148.75	154.06	159.38
$1\frac{5}{8}$	121.55	127.08	132.60	138.13	143.65	149.18	154.70	160.23	165.75
$1\frac{11}{16}$	126.23	131.96	137.70	143.44	149.18	154.91	160.65	166.39	172.13
$1\frac{3}{4}$	130.90	136.85	142.80	148.75	154.70	160.65	166.60	172.55	178.50
$1\frac{13}{16}$	135.58	141.74	147.90	154.06	160.23	166.39	172.55	178.71	184.88
$1\frac{7}{8}$	140.25	146.63	153.00	159.38	165.75	172.13	178.50	184.88	191.25
$1\frac{15}{16}$	144.93	151.51	158.10	164.69	171.28	177.86	184.45	191.04	197.63
2	149.60	156.40	163.20	170.00	176.80	183.60	190.40	197.20	204.00

# WEIGHTS OF ROLLED STEEL PLATES

## PER LINEAL FOOT

Thickness Inches	WIDTH, INCHES								
	31	32	33	34	35	36	38	40	42
$\frac{3}{16}$	19.75	20.40	21.04	21.68	22.32	22.96	24.20	25.52	26.80
$\frac{1}{4}$	26.36	27.20	28.04	28.88	29.72	30.59	32.32	34.00	35.68
$\frac{5}{16}$	32.94	34.00	35.04	36.12	37.16	38.24	40.39	42.48	44.64
$\frac{3}{8}$	39.54	40.80	42.08	43.36	44.64	45.92	48.48	51.00	53.56
$\frac{7}{16}$	46.12	47.60	49.08	50.57	52.07	53.58	56.56	59.50	62.48
$\frac{1}{2}$	52.70	54.40	56.10	57.78	59.50	61.20	64.62	68.00	71.40
$\frac{9}{16}$	59.32	61.22	63.12	65.04	66.96	68.88	72.68	76.54	80.32
$\frac{5}{8}$	65.88	68.00	70.13	72.24	74.36	76.50	80.74	85.00	89.28
$\frac{11}{16}$	72.48	74.80	77.12	79.44	81.79	84.15	88.84	93.48	98.16
$\frac{3}{4}$	79.08	81.61	84.16	86.72	89.28	91.84	96.92	102.00	107.12
$\frac{13}{16}$	85.62	88.39	91.15	93.91	96.68	99.44	104.96	110.50	116.02
$\frac{7}{8}$	92.20	95.20	98.20	101.20	104.16	107.12	113.04	119.00	124.98
$\frac{15}{16}$	98.82	102.00	105.20	108.40	111.59	114.76	121.14	127.52	133.92
1	105.40	108.80	112.20	115.60	119.00	122.40	129.20	136.00	142.80
$1\frac{1}{16}$	112.00	115.59	119.20	122.80	126.42	130.04	137.28	144.50	151.70
$1\frac{1}{8}$	118.56	122.40	126.24	130.08	133.90	137.70	145.36	153.00	160.66
$1\frac{3}{16}$	125.16	129.21	133.24	137.28	141.32	145.36	153.44	161.50	169.58
$1\frac{1}{4}$	131.76	136.00	140.28	144.52	148.76	153.00	161.48	170.00	178.52
$1\frac{5}{16}$	138.36	142.81	147.24	151.72	156.20	160.66	169.60	178.56	187.44
$1\frac{3}{8}$	144.92	149.60	154.28	158.96	163.62	168.30	177.66	187.00	196.34
$1\frac{7}{16}$	151.52	156.40	161.28	166.16	171.08	176.00	185.75	195.50	205.29
$1\frac{1}{2}$	158.11	163.20	168.32	173.40	178.51	183.60	193.80	204.00	214.20
$1\frac{9}{16}$	164.69	170.00	175.31	180.63	185.94	191.25	201.88	212.50	223.13
$1\frac{5}{8}$	171.28	176.80	182.33	187.85	193.38	198.90	209.95	221.00	232.05
$1\frac{11}{16}$	177.86	183.60	189.34	195.08	200.81	206.55	218.03	229.50	240.98
$1\frac{3}{4}$	184.45	190.40	196.35	202.30	208.25	214.20	226.10	238.00	249.90
$1\frac{13}{16}$	191.04	197.20	203.36	209.53	215.69	221.85	234.18	246.50	258.83
$1\frac{7}{8}$	197.63	204.00	210.38	216.75	223.13	229.50	242.25	255.00	267.75
$1\frac{15}{16}$	204.21	210.80	217.39	223.98	230.56	237.15	250.33	263.50	276.68
2	210.80	217.60	224.40	231.20	238.00	244.80	258.40	272.00	285.60



# WEIGHTS OF ROLLED STEEL PLATES

## PER LINEAL FOOT

Thickness Inches	WIDTH, INCHES								
	44	46	48	50	52	54	56	58	60
$\frac{3}{16}$	28.08	29.29	30.64	31.92	33.12	34.40	35.68	36.96	38.24
$\frac{1}{2}$	37.38	39.11	40.80	42.52	44.24	45.92	47.60	49.28	51.00
$\frac{5}{16}$	46.72	48.88	51.04	53.12	55.24	57.36	59.51	61.60	63.76
$\frac{3}{8}$	56.12	58.65	61.20	63.76	66.32	68.88	71.44	74.00	76.56
$\frac{7}{16}$	65.44	68.47	71.44	74.40	77.37	80.34	83.30	86.28	89.28
$\frac{1}{2}$	74.80	78.20	81.60	85.00	88.40	91.84	95.20	98.56	102.00
$\frac{9}{16}$	84.09	88.00	91.84	95.60	99.46	103.28	107.12	110.96	114.80
$\frac{5}{8}$	93.52	97.76	102.00	106.24	110.48	114.74	118.98	123.20	127.52
$\frac{11}{16}$	102.81	107.53	112.24	116.88	121.56	126.22	130.88	135.54	140.26
$\frac{3}{4}$	112.20	117.31	122.40	127.52	132.64	137.76	142.85	147.94	153.06
$\frac{13}{16}$	121.56	127.06	132.58	138.12	143.64	149.16	154.68	160.20	165.72
$\frac{7}{8}$	130.89	136.86	142.80	148.76	154.72	160.66	166.60	172.58	178.48
$\frac{15}{16}$	140.27	146.64	153.00	159.36	165.76	172.15	178.52	184.88	191.28
1	149.60	156.40	163.20	170.00	176.80	183.60	190.40	197.20	204.00
$1\frac{1}{16}$	158.96	166.16	173.40	180.64	187.84	195.08	202.28	209.50	216.76
$1\frac{1}{8}$	168.32	175.99	183.60	191.28	198.88	206.52	214.20	221.84	229.48
$1\frac{3}{16}$	177.66	185.76	193.84	201.84	209.92	218.02	226.10	234.18	242.26
$1\frac{1}{4}$	187.04	195.52	204.00	212.48	221.00	229.52	238.00	246.48	255.02
$1\frac{5}{16}$	196.32	205.28	214.24	223.12	232.08	241.00	249.88	258.80	267.78
$1\frac{3}{8}$	205.68	215.04	224.40	233.76	243.08	252.44	261.80	271.16	280.48
$1\frac{7}{16}$	215.04	224.84	234.60	244.40	254.16	263.92	273.68	283.52	293.28
$1\frac{1}{2}$	224.40	234.60	244.80	255.00	265.20	275.44	285.60	295.84	306.04
$1\frac{9}{16}$	233.75	244.38	255.00	265.63	276.25	286.88	297.50	308.13	318.75
$1\frac{5}{8}$	243.10	254.15	265.20	276.25	287.30	298.35	309.40	320.45	331.50
$1\frac{11}{16}$	252.45	263.93	275.40	286.88	298.35	309.83	321.30	332.78	344.25
$1\frac{3}{4}$	261.80	273.70	285.60	297.50	309.40	321.30	333.20	345.10	357.00
$1\frac{13}{16}$	271.15	283.48	295.80	308.13	320.45	332.78	345.10	357.43	369.75
$1\frac{7}{8}$	280.50	293.25	306.00	318.75	331.50	344.25	357.00	369.75	382.50
$1\frac{15}{16}$	289.85	303.03	316.20	329.38	342.55	355.73	368.90	382.08	395.25
2	299.20	312.80	326.40	340.00	353.60	367.20	380.80	394.40	408.00

**SHEET STEEL****WEIGHT PER SQUARE FOOT**

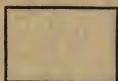
THICKNESS		Weight, Pounds	THICKNESS		Weight, Pounds
Birmingham Gauge	Inches		Birmingham Gauge	Inches	
1	.300	12.24	16	.065	2.66
2	.284	11.59	17	.058	2.37
3	.259	10.57	18	.049	2.00
4	.238	9.71	19	.042	1.72
5	.220	8.98	20	.035	1.43
6	.203	8.29	21	.032	1.31
7	.180	7.35	22	.028	1.14
8	.165	6.74	23	.025	1.02
9	.148	6.04	24	.022	.90
10	.134	5.46	25	.020	.82
11	.120	4.90	26	.018	.74
12	.109	4.45	27	.016	.66
13	.095	3.88	28	.014	.57
14	.083	3.39	29	.013	.53
15	.072	2.94	30	.012	.49

For weights of sheets in United States Standard gauges, see table on page 175.

**TANK STEEL****WEIGHT PER SQUARE FOOT**

THICKNESS, INCHES		Weight, Pounds	THICKNESS, INCHES		Weight, Pounds
Fractions	Decimals		Fractions	Decimals	
$\frac{1}{32}$	.03125	1.275	$\frac{5}{16}$	.3125	12.75
$\frac{1}{16}$	.06250	2.550	$\frac{3}{8}$	.3750	15.30
$\frac{3}{32}$	.09375	3.825	$\frac{7}{16}$	.4375	17.85
$\frac{1}{8}$	.12500	5.100	$\frac{1}{2}$	.5000	20.40
$\frac{5}{32}$	.15625	6.375	$\frac{9}{16}$	.5625	22.95
$\frac{3}{16}$	.18750	7.650	$\frac{5}{8}$	.6250	25.50
$\frac{7}{32}$	.21875	8.925	$\frac{3}{4}$	.7500	30.60
$\frac{1}{4}$	.25000	10.200	$\frac{7}{8}$	.8750	35.70
$\frac{9}{32}$	.28125	11.475	1	1.0000	40.80



**NUT STEEL FLATS**

All sizes from  $2\frac{3}{8}'' \times 1\frac{9}{16}''$  to  $\frac{9}{16}'' \times \frac{9}{32}''$ , inclusive,

can be furnished. Weights appear

in tables of Flat Rolled

Steel, pages 119 to 128

inclusive.

NOTE.—A list of sizes of nut steel flats which may be obtained in coils is given on page 153.

## FLAT ROLLED STEEL

Width, Inches	Thickness, Inches	Width, Inches	Thickness, Inches
$\frac{1}{2}$	$\frac{7}{64}$ to $\frac{7}{16}$	$4\frac{1}{2}$	$\frac{1}{8}$ to 2
$\frac{3}{4}$	$\frac{7}{64}$ to $\frac{9}{16}$	$4\frac{3}{4}$	$\frac{1}{8}$ to $2\frac{1}{4}$
$\frac{1}{2}$	$\frac{7}{64}$ to $\frac{11}{16}$	$4\frac{1}{2}$	$\frac{1}{8}$ to 2
$\frac{3}{4}$	$\frac{7}{64}$ to $\frac{13}{16}$	$4\frac{3}{4}$	$\frac{1}{8}$ to $2\frac{3}{4}$
$\frac{7}{8}$	$\frac{7}{64}$ to $\frac{15}{16}$	$5$	$\frac{1}{8}$ to 2
1	$\frac{7}{64}$ to $\frac{15}{16}$	$5\frac{1}{2}$	$\frac{1}{8}$ to 2
$1\frac{1}{8}$	$\frac{7}{64}$ to 1	$5\frac{3}{8}$	$\frac{1}{8}$ to $2\frac{3}{8}$
$1\frac{1}{4}$	$\frac{7}{64}$ to $1\frac{1}{8}$	$5\frac{1}{2}$	$\frac{1}{8}$ to 2
$1\frac{3}{8}$	$\frac{7}{64}$ to $1\frac{1}{4}$	$5\frac{3}{4}$	$\frac{1}{8}$ to 2
$1\frac{1}{2}$	$\frac{7}{64}$ to $1\frac{3}{8}$	6	$\frac{1}{8}$ to 2
$1\frac{3}{4}$	$\frac{7}{64}$ to $1\frac{1}{2}$	$6\frac{1}{4}$	$\frac{1}{8}$ to 2
$1\frac{7}{8}$	$\frac{7}{64}$ to $1\frac{5}{8}$	$6\frac{1}{2}$	$\frac{1}{8}$ to 2
2	$\frac{7}{64}$ to $1\frac{3}{4}$	$6\frac{3}{4}$	$\frac{1}{8}$ to 2
$2\frac{1}{8}$	$\frac{7}{64}$ to $1\frac{7}{8}$	7	$\frac{1}{8}$ to 2
$2\frac{1}{4}$	$\frac{7}{64}$ to 2	$7\frac{1}{4}$	$\frac{1}{8}$ to 2
$2\frac{3}{8}$	$\frac{7}{64}$ to $2\frac{1}{4}$	$7\frac{1}{2}$	$\frac{1}{8}$ to 2
$2\frac{1}{2}$	$\frac{7}{64}$ to $2\frac{1}{2}$	$7\frac{3}{4}$	$\frac{1}{8}$ to 2
$2\frac{5}{8}$	$\frac{7}{64}$ to $2\frac{3}{4}$	$7\frac{7}{8}$	$\frac{1}{8}$ to 2
$2\frac{3}{4}$	$\frac{7}{64}$ to $2\frac{5}{8}$	8	$\frac{1}{8}$ to 2
$2\frac{7}{8}$	$\frac{7}{64}$ to $2\frac{7}{8}$	$8\frac{1}{2}$	$\frac{1}{8}$ to 2
3	$\frac{7}{64}$ to 3	9	$\frac{1}{8}$ to 2
$3\frac{1}{8}$	$\frac{7}{64}$ to $3\frac{1}{8}$	$9\frac{1}{2}$	$\frac{1}{8}$ to 2
$3\frac{1}{4}$	$\frac{7}{64}$ to $3\frac{1}{4}$	$9\frac{3}{4}$	$\frac{1}{8}$ to 2
$3\frac{3}{8}$	$\frac{7}{64}$ to $3\frac{3}{8}$	10	$\frac{5}{32}$ to 2
$3\frac{1}{2}$	$\frac{7}{64}$ to $3\frac{1}{2}$	$10\frac{1}{2}$	$\frac{5}{32}$ to 2
$3\frac{5}{8}$	$\frac{7}{64}$ to 3	11	$\frac{1}{4}$ to 2
$3\frac{3}{4}$	$\frac{7}{64}$ to $3\frac{1}{2}$	$11\frac{1}{4}$	.180 to .375
$3\frac{7}{8}$	$\frac{7}{64}$ to $3\frac{3}{8}$	12	$\frac{1}{4}$ to 2
4	$\frac{7}{64}$ to $3\frac{1}{2}$	13	$\frac{1}{4}$ to 2
$4\frac{1}{8}$	$\frac{7}{64}$ to $4\frac{1}{4}$	$13\frac{1}{4}$	.180 to .375
$4\frac{1}{4}$	$\frac{7}{64}$ to 2	14	$\frac{1}{4}$ to 2
$4\frac{3}{8}$	$\frac{7}{64}$ to $\frac{3}{4}$	15	.203 to .375

NOTE.—For other widths see table of Universal Mill Plates page 108.

Thicknesses greater than those given may be arranged for in some of the above sizes.

## FLAT ROLLED STEEL

## MAXIMUM LENGTHS OF BARS IN FEET

Width Inches	THICKNESS, INCHES																
	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
13		65	65	65	65	65	58	52	48	44	40	37	32	26	22	18	16
12		65	65	65	65	65	65	60	54	50	45	42	38	30	25	21	18
11		65	65	65	65	65	65	60	54	50	45	42	38	30	25	21	18
$10\frac{1}{2}$	50	50	50	45	45	40	40	35	35	28	28	28	25	20	16	13	10
10	50	50	50	50	45	40	35	32	29	27	25	23	20	15	13	11	10
$9\frac{3}{4}$	50	50	50	50	50	50	46	42	38	35	32	30	26	21	17	15	13
$9\frac{1}{2}$	50	50	50	50	50	50	46	42	38	35	32	30	26	21	17	15	13
9	50	50	50	50	50	50	46	42	38	35	32	30	26	21	17	15	13
$8\frac{1}{2}$	50	50	50	50	50	47	41	37	33	31	28	26	23	18	15	13	11
8	50	50	50	50	50	50	50	45	41	37	34	32	28	22	18	16	14
$7\frac{3}{4}$	50	50	50	50	50	50	50	48	44	41	37	35	30	24	20	17	15
$7\frac{1}{2}$	50	50	50	50	50	50	50	45	41	38	34	32	28	22	19	16	14
$7\frac{1}{4}$	50	50	50	50	50	50	50	50	47	43	39	36	32	25	21	18	16
7	50	50	50	50	50	50	50	50	48	44	40	38	33	26	22	19	16
$6\frac{3}{4}$	40	40	40	40	40	40	40	40	40	40	40	38	33	26	22	18	16
$6\frac{1}{2}$	50	50	50	50	50	50	50	50	48	44	41	38	33	26	22	19	16
6	50	50	50	50	50	50	50	50	50	49	45	42	36	29	24	21	18
$5\frac{1}{2}$	50	50	50	50	50	50	50	48	43	40	36	34	30	24	20	17	15
5	50	50	50	50	50	50	50	50	50	50	50	50	47	38	31	26	23
$4\frac{1}{2}$	50	50	50	50	50	50	50	50	50	50	50	50	50	40	34	29	25
$4\frac{1}{4}$	50	50	50	50	50	50	50	50	50	50	50	50	50	43	37	32	28
4	50	50	50	50	50	50	50	50	50	50	50	50	50	45	39	33	29
$3\frac{3}{4}$	40	40	40	40	40	40	40	37	33	32	29	27	24	19	15	34	30
$3\frac{1}{2}$	40	40	40	40	40	40	40	40	37	34	31	29	25	20	17	37	32
$3\frac{1}{4}$	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	34
3	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	38
$2\frac{3}{4}$	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
$2\frac{1}{2}$	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
$2\frac{1}{4}$	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
2	40	40	40	40	40	40	40	40	40	40	40	40	40	36	30	25	
$1\frac{3}{4}$	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35		
$1\frac{1}{2}$	35	35	35	35	35	35	35	35	35	35	35	35	35	35			
$1\frac{1}{4}$	35	35	35	35	35	35	35	35	35	35	35	35	35				
1	35	35	35	35	35	35	35	35	35	35	35	35					

NOTE.—For lengths of plates above 13 inches in width see table of Universal Mill Plates on page 108.

On many sizes longer lengths can be rolled. We invite inquiry regarding special requirements.

# WEIGHTS OF FLAT ROLLED STEEL PER LINEAL FOOT

For thicknesses from  $\frac{1}{16}$  inch to  $\frac{1}{8}$  inch, and widths from  $\frac{3}{32}$  inch to 1  $\frac{1}{2}$  inches.

Thickness Inches	WIDTH, INCHES								
	$\frac{3}{32}$	$\frac{1}{16}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{5}{32}$	$\frac{3}{16}$	$\frac{7}{32}$	$\frac{1}{2}$	1
$\frac{1}{16}$	.007	.013	.020	.027	.033	.040	.046	.053	.213
$\frac{5}{64}$	.008	.017	.025	.033	.042	.050	.058	.066	.266
$\frac{3}{32}$	.010	.020	.030	.040	.050	.060	.070	.080	.319
$\frac{7}{64}$	.012	.023	.035	.046	.058	.070	.081	.093	.372
$\frac{1}{8}$	.013	.027	.040	.053	.066	.080	.093	.106	.425
$\frac{9}{64}$	.015	.030	.045	.060	.075	.090	.105	.120	.478
$\frac{5}{32}$	.017	.033	.050	.066	.083	.100	.116	.133	.531
$\frac{11}{64}$	.018	.037	.055	.073	.091	.110	.128	.146	.584
$\frac{3}{16}$	.020	.040	.060	.080	.100	.120	.139	.159	.638
$\frac{13}{64}$	.022	.043	.065	.086	.108	.130	.151	.173	.691
$\frac{7}{32}$	.023	.046	.070	.093	.116	.140	.163	.186	.744
$\frac{15}{64}$	.025	.050	.075	.100	.125	.149	.174	.199	.797
$\frac{1}{4}$	.027	.053	.080	.106	.133	.159	.186	.213	.850
$\frac{17}{64}$	.028	.056	.085	.113	.141	.169	.198	.226	.903
$\frac{9}{32}$	.030	.060	.090	.120	.149	.179	.209	.239	.956
$\frac{19}{64}$	.032	.063	.095	.126	.158	.189	.221	.252	1.01
$\frac{5}{16}$	.033	.067	.100	.133	.166	.199	.232	.266	1.06
$\frac{21}{64}$	.035	.070	.105	.139	.174	.209	.244	.279	1.12
$\frac{11}{32}$	.037	.073	.110	.146	.182	.219	.256	.292	1.17
$\frac{23}{64}$	.038	.076	.115	.153	.191	.229	.267	.305	1.22
$\frac{3}{8}$	.040	.080	.120	.160	.200	.239	.279	.319	1.28
$\frac{25}{64}$	.042	.083	.125	.166	.208	.249	.291	.332	1.33
$\frac{13}{32}$	.043	.086	.129	.172	.216	.259	.302	.345	1.38
$\frac{27}{64}$	.045	.090	.134	.179	.224	.269	.314	.359	1.43
$\frac{7}{16}$	.046	.093	.139	.186	.232	.279	.325	.372	1.49
$\frac{29}{64}$	.048	.096	.144	.193	.241	.289	.337	.385	1.54
$\frac{15}{32}$	.050	.100	.149	.200	.249	.299	.349	.398	1.59
$\frac{31}{64}$	.051	.103	.154	.206	.257	.309	.360	.412	1.65
$\frac{1}{2}$	.053	.106	.159	.213	.266	.319	.372	.425	1.70
$\frac{33}{64}$	.055	.110	.164	.219	.274	.329	.383	.438	1.75
$\frac{17}{32}$	.056	.113	.169	.226	.282	.339	.395	.452	1.81
$\frac{35}{64}$	.058	.116	.174	.232	.290	.349	.407	.465	1.86
$\frac{9}{16}$	.060	.120	.179	.239	.299	.359	.418	.478	1.91

NOTE.— For plates over 13 inches in width see pages 111 to 114.



# WEIGHTS OF FLAT ROLLED STEEL PER LINEAL FOOT

(Continued)

Thickness Inches	WIDTH, INCHES								
	$\frac{9}{32}$	$\frac{5}{16}$	$\frac{11}{32}$	$\frac{3}{8}$	$\frac{13}{32}$	$\frac{7}{16}$	$\frac{15}{32}$	$\frac{1}{2}$	1
$\frac{1}{16}$	.060	.066	.073	.080	.086	.093	.100	.106	.213
$\frac{5}{64}$	.075	.083	.091	.100	.108	.116	.125	.133	.266
$\frac{3}{32}$	.090	.100	.110	.120	.129	.139	.149	.159	.319
$\frac{7}{64}$	.105	.116	.128	.139	.151	.163	.174	.186	.372
$\frac{1}{8}$	.120	.133	.146	.159	.173	.186	.199	.212	.425
$\frac{9}{64}$	.134	.149	.164	.179	.194	.209	.224	.239	.478
$\frac{5}{32}$	.149	.166	.183	.199	.216	.232	.249	.266	.531
$\frac{11}{64}$	.164	.183	.201	.219	.237	.256	.274	.292	.584
$\frac{3}{16}$	.179	.199	.219	.239	.259	.279	.299	.319	.638
$\frac{13}{64}$	.194	.216	.237	.259	.281	.302	.324	.345	.691
$\frac{7}{32}$	.209	.232	.256	.279	.302	.325	.349	.372	.744
$\frac{15}{64}$	.224	.249	.274	.299	.324	.349	.374	.398	.797
$\frac{1}{2}$	.239	.266	.292	.319	.345	.372	.398	.425	.850
$\frac{17}{64}$	.254	.282	.310	.339	.367	.395	.423	.452	.903
$\frac{9}{32}$	.269	.299	.329	.359	.388	.418	.448	.478	.956
$\frac{19}{64}$	.284	.315	.347	.379	.410	.442	.473	.505	1.01
$\frac{5}{16}$	.299	.332	.365	.398	.432	.465	.498	.531	1.06
$\frac{21}{64}$	.314	.349	.383	.418	.453	.488	.523	.558	1.12
$\frac{11}{32}$	.329	.365	.402	.438	.475	.511	.548	.584	1.17
$\frac{23}{64}$	.344	.382	.420	.458	.496	.535	.573	.611	1.22
$\frac{3}{8}$	.359	.398	.438	.478	.518	.558	.598	.638	1.28
$\frac{25}{64}$	.374	.415	.457	.498	.540	.581	.623	.664	1.33
$\frac{13}{32}$	.388	.432	.475	.518	.561	.604	.647	.691	1.38
$\frac{27}{64}$	.403	.448	.493	.538	.583	.628	.672	.717	1.43
$\frac{7}{16}$	.418	.465	.511	.558	.604	.651	.697	.744	1.49
$\frac{29}{64}$	.433	.481	.530	.578	.626	.674	.722	.770	1.54
$\frac{15}{32}$	.448	.498	.548	.598	.647	.697	.747	.797	1.59
$\frac{31}{64}$	.463	.515	.566	.618	.669	.721	.772	.823	1.65
$\frac{1}{2}$	.478	.531	.584	.638	.691	.744	.797	.850	1.70
$\frac{33}{64}$	.493	.548	.603	.657	.712	.767	.822	.877	1.75
$\frac{17}{32}$	.508	.564	.621	.677	.734	.790	.847	.903	1.81
$\frac{35}{64}$	.523	.581	.639	.697	.755	.813	.872	.930	1.86
$\frac{9}{16}$	.538	.598	.657	.717	.777	.837	.896	.956	1.91

NOTE.— For plates over 13 inches in width see pages 111 to 114.



# WEIGHTS OF FLAT ROLLED STEEL PER LINEAL FOOT

(Continued)

Thickness Inches	WIDTH, INCHES								
	17 32	9 16	19 32	5 8	21 32	11 16	23 32	4	1
1 16	.113	.120	.126	.133	.139	.146	.153	.159	.213
5 64	.141	.149	.158	.166	.174	.183	.191	.199	.266
3 32	.169	.179	.189	.199	.209	.219	.229	.239	.319
7 64	.198	.209	.221	.232	.244	.256	.267	.279	.372
1 8	.226	.239	.252	.266	.279	.292	.305	.319	.425
9 64	.254	.269	.284	.299	.314	.329	.344	.359	.478
5 32	.282	.299	.315	.332	.349	.365	.382	.398	.531
11 64	.310	.329	.347	.365	.383	.402	.420	.438	.584
3 16	.339	.359	.379	.398	.418	.438	.458	.478	.638
13 64	.367	.388	.410	.432	.453	.475	.496	.518	.691
7 32	.395	.418	.442	.465	.488	.511	.535	.558	.744
15 64	.423	.448	.473	.498	.523	.548	.573	.598	.797
1 4	.452	.478	.505	.531	.558	.584	.611	.638	.850
17 64	.480	.508	.536	.564	.593	.621	.649	.677	.903
9 32	.508	.538	.568	.598	.628	.657	.687	.717	.956
19 64	.536	.568	.599	.631	.662	.694	.725	.757	1.01
5 16	.564	.598	.631	.664	.697	.730	.764	.797	1.06
21 64	.593	.628	.662	.697	.732	.767	.802	.837	1.12
11 32	.621	.657	.694	.730	.767	.804	.840	.877	1.17
23 64	.649	.687	.725	.764	.802	.840	.878	.916	1.22
3 8	.677	.717	.757	.797	.837	.877	.916	.956	1.28
25 64	.706	.747	.789	.830	.872	.913	.955	.996	1.33
13 32	.734	.777	.820	.863	.906	.950	.993	1.04	1.38
27 64	.762	.807	.852	.896	.941	.986	1.03	1.08	1.43
7 16	.790	.837	.883	.930	.976	1.02	1.07	1.12	1.49
29 64	.818	.867	.915	.963	1.01	1.06	1.11	1.16	1.54
15 32	.847	.896	.946	.996	1.05	1.10	1.15	1.20	1.59
31 64	.875	.926	.978	1.03	1.08	1.13	1.18	1.24	1.65
1 2	.903	.956	1.01	1.06	1.12	1.17	1.22	1.28	1.70
33 64	.931	.986	1.04	1.10	1.15	1.21	1.26	1.31	1.75
17 32	.960	1.02	1.07	1.13	1.19	1.24	1.30	1.35	1.81
35 64	.988	1.05	1.10	1.16	1.22	1.28	1.34	1.39	1.86
9 16	1.02	1.08	1.14	1.20	1.26	1.31	1.37	1.43	1.91

NOTE.— For plates over 13 inches in width see pages 111 to 114.

# WEIGHTS OF FLAT ROLLED STEEL PER LINEAL FOOT

(Continued)

Thickness Inches	WIDTH, INCHES								
	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	12
$\frac{1}{16}$	.173	.186	.199	.213	.239	.266	.292	.319	2.55
$\frac{5}{64}$	.216	.232	.249	.266	.299	.332	.365	.398	3.19
$\frac{3}{32}$	.259	.279	.299	.319	.358	.398	.438	.478	3.83
$\frac{7}{64}$	.302	.325	.349	.372	.418	.465	.511	.558	4.46
$\frac{1}{8}$	.345	.372	.399	.425	.478	.531	.584	.638	5.10
$\frac{9}{64}$	.388	.418	.448	.478	.538	.598	.657	.717	5.74
$\frac{5}{32}$	.432	.465	.498	.531	.598	.664	.730	.797	6.38
$\frac{11}{64}$	.475	.511	.548	.584	.657	.730	.803	.876	7.01
$\frac{3}{16}$	.518	.558	.598	.638	.717	.797	.877	.956	7.65
$\frac{13}{64}$	.561	.604	.647	.691	.777	.863	.950	1.04	8.29
$\frac{7}{32}$	.604	.651	.697	.744	.837	.930	1.02	1.12	8.93
$\frac{15}{64}$	.647	.697	.747	.797	.896	.996	1.10	1.20	9.56
$\frac{1}{4}$	.691	.744	.797	.850	.956	1.06	1.17	1.28	10.20
$\frac{17}{64}$	.734	.790	.847	.903	1.02	1.13	1.24	1.35	10.84
$\frac{9}{32}$	.777	.837	.896	.956	1.08	1.20	1.31	1.43	11.48
$\frac{19}{64}$	.820	.883	.946	1.01	1.14	1.26	1.39	1.51	12.11
$\frac{5}{16}$	.863	.929	.996	1.06	1.20	1.33	1.46	1.59	12.75
$\frac{21}{64}$	.906	.976	1.05	1.12	1.25	1.39	1.53	1.67	13.39
$\frac{11}{32}$	.949	1.02	1.10	1.17	1.31	1.46	1.61	1.75	14.03
$\frac{23}{64}$	.993	1.07	1.15	1.22	1.37	1.53	1.68	1.83	14.66
$\frac{3}{8}$	1.04	1.12	1.20	1.28	1.43	1.59	1.75	1.91	15.30
$\frac{25}{64}$	1.08	1.16	1.25	1.33	1.49	1.66	1.83	1.99	15.94
$\frac{13}{32}$	1.12	1.21	1.29	1.38	1.55	1.72	1.90	2.07	16.58
$\frac{27}{64}$	1.16	1.25	1.34	1.43	1.61	1.79	1.97	2.15	17.21
$\frac{7}{16}$	1.21	1.30	1.39	1.49	1.67	1.86	2.05	2.23	17.85
$\frac{29}{64}$	1.25	1.35	1.44	1.54	1.73	1.93	2.12	2.31	18.49
$\frac{15}{32}$	1.29	1.39	1.49	1.59	1.79	1.99	2.19	2.39	19.13
$\frac{31}{64}$	1.34	1.44	1.54	1.65	1.85	2.06	2.26	2.47	19.76
$\frac{1}{2}$	1.38	1.49	1.59	1.70	1.91	2.13	2.34	2.55	20.40
$\frac{33}{64}$	1.42	1.53	1.64	1.75	1.97	2.19	2.41	2.63	21.04
$\frac{17}{32}$	1.47	1.58	1.69	1.81	2.03	2.26	2.48	2.71	21.68
$\frac{35}{64}$	1.51	1.63	1.74	1.86	2.09	2.32	2.56	2.79	22.31
$\frac{9}{16}$	1.55	1.67	1.79	1.91	2.15	2.39	2.63	2.87	22.95

NOTE.— For plates over 13 inches in width see pages 111 to 114.

# WEIGHTS OF FLAT ROLLED STEEL

## PER LINEAL FOOT

For thicknesses from  $\frac{1}{16}$  inch to 2 inches, and widths from  $1\frac{1}{4}$  inches to 13 inches.

Thickness Inches	WIDTH, INCHES								
	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{4}$	2	$2\frac{1}{8}$	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{4}$	12
$\frac{3}{16}$	1.04	1.12	1.20	1.28	1.36	1.43	1.59	1.75	7.65
$\frac{1}{4}$	1.38	1.49	1.59	1.70	1.81	1.91	2.13	2.34	10.20
$\frac{5}{16}$	1.73	1.86	1.99	2.13	2.26	2.39	2.66	2.92	12.75
$\frac{3}{8}$	2.07	2.23	2.39	2.55	2.71	2.87	3.19	3.51	15.30
$\frac{7}{16}$	2.42	2.60	2.79	2.98	3.16	3.35	3.72	4.09	17.85
$\frac{1}{2}$	2.76	2.98	3.19	3.40	3.61	3.83	4.25	4.68	20.40
$\frac{9}{16}$	3.11	3.35	3.59	3.83	4.06	4.30	4.78	5.26	22.95
$\frac{5}{8}$	3.45	3.72	3.98	4.25	4.52	4.78	5.31	5.84	25.50
$1\frac{1}{16}$	3.80	4.09	4.38	4.68	4.97	5.26	5.84	6.43	28.05
$1\frac{3}{16}$	4.14	4.46	4.78	5.10	5.42	5.74	6.38	7.01	30.60
$1\frac{1}{8}$	4.49	4.83	5.18	5.53	5.87	6.22	6.91	7.60	33.15
$1\frac{3}{8}$	4.83	5.21	5.58	5.95	6.32	6.69	7.44	8.18	35.70
$1\frac{5}{8}$	5.18	5.58	5.98	6.38	6.77	7.17	7.97	8.77	38.25
1	5.53	5.95	6.38	6.80	7.23	7.65	8.50	9.35	40.80
$1\frac{1}{16}$	5.87	6.32	6.77	7.23	7.68	8.13	9.03	9.93	43.35
$1\frac{1}{8}$	6.22	6.69	7.17	7.65	8.13	8.61	9.56	10.52	45.90
$1\frac{3}{16}$	6.56	7.07	7.57	8.08	8.58	9.08	10.09	11.10	48.45
$1\frac{1}{4}$	6.72	7.44	7.97	8.50	9.03	9.56	10.63	11.69	51.00
$1\frac{5}{16}$	7.25	7.81	8.37	8.93	9.48	10.04	11.16	12.27	53.55
$1\frac{3}{8}$	7.60	8.18	8.77	9.35	9.93	10.52	11.69	12.86	56.10
$1\frac{7}{16}$	7.94	8.55	9.16	9.78	10.39	11.00	12.22	13.44	58.65
$1\frac{1}{2}$	8.29	8.93	9.56	10.20	10.84	11.48	12.75	14.03	61.20
$1\frac{9}{16}$	8.63	9.30	9.96	10.63	11.29	11.95	13.28	14.61	63.75
$1\frac{5}{8}$	8.98	9.67	10.36	11.05	11.74	12.43	13.81	15.19	66.30
$1\frac{11}{16}$	9.32	10.04	10.76	11.48	12.19	12.91	14.34	15.78	68.85
$1\frac{3}{4}$	9.67	10.41	11.16	11.90	12.64	13.39	14.88	16.36	71.40
$1\frac{13}{16}$	10.01	10.78	11.55	12.33	13.10	13.87	15.41	16.95	73.95
$1\frac{7}{8}$	10.36	11.16	11.95	12.75	13.55	14.34	15.94	17.53	76.50
$1\frac{15}{16}$	10.70	11.53	12.35	13.18	14.00	14.82	16.47	18.12	79.05
2	11.05	11.90	12.75	13.60	14.45	15.30	17.00	18.70	81.60

NOTE.— For plates over 13 inches in width see pages 111 to 114.



# **WEIGHTS OF FLAT ROLLED STEEL**

## **PER LINEAL FOOT**

(Continued)

Thickness Inches	WIDTH, INCHES								
	3	3½	3¾	3⅞	4	4½	4¾	4⅞	12
$\frac{3}{16}$	1.91	2.07	2.23	2.39	2.55	2.71	2.87	3.03	7.65
$\frac{1}{4}$	2.55	2.76	2.98	3.19	3.40	3.61	3.83	4.04	10.20
$\frac{5}{16}$	3.19	3.45	3.72	3.99	4.25	4.52	4.78	5.05	12.75
$\frac{3}{8}$	3.83	4.15	4.47	4.78	5.10	5.42	5.74	6.06	15.30
$\frac{7}{16}$	4.46	4.83	5.20	5.58	5.95	6.32	6.70	7.07	17.85
$\frac{1}{2}$	5.10	5.53	5.95	6.38	6.80	7.22	7.65	8.08	20.40
$\frac{9}{16}$	5.74	6.22	6.70	7.17	7.65	8.13	8.61	9.09	22.95
$\frac{5}{8}$	6.38	6.91	7.44	7.97	8.50	9.03	9.57	10.10	25.50
$\frac{11}{16}$	7.02	7.60	8.18	8.76	9.35	9.93	10.52	11.11	28.05
$\frac{3}{4}$	7.65	8.29	8.93	9.57	10.20	10.84	11.48	12.12	30.60
$\frac{13}{16}$	8.29	8.98	9.67	10.36	11.05	11.74	12.43	13.12	33.15
$\frac{7}{8}$	8.93	9.67	10.41	11.16	11.90	12.65	13.39	14.13	35.70
$\frac{15}{16}$	9.57	10.36	11.16	11.95	12.75	13.55	14.34	15.14	38.25
1	10.20	11.05	11.90	12.75	13.60	14.45	15.30	16.15	40.80
$1\frac{1}{16}$	10.84	11.74	12.65	13.55	14.45	15.35	16.26	17.16	43.35
$1\frac{1}{8}$	11.48	12.43	13.39	14.34	15.30	16.26	17.22	18.17	45.90
$1\frac{3}{16}$	12.12	13.12	14.13	15.14	16.15	17.16	18.17	19.18	48.45
$1\frac{1}{4}$	12.75	13.81	14.87	15.94	17.00	18.06	19.13	20.19	51.00
$1\frac{5}{16}$	13.39	14.50	15.62	16.74	17.85	18.96	20.08	21.20	53.55
$1\frac{3}{8}$	14.03	15.20	16.36	17.53	18.70	19.87	21.04	22.21	56.10
$1\frac{7}{16}$	14.66	15.88	17.10	18.33	19.55	20.77	21.99	23.22	58.65
$1\frac{1}{2}$	15.30	16.58	17.85	19.13	20.40	21.68	22.95	24.23	61.20
$1\frac{9}{16}$	15.94	17.27	18.60	19.92	21.25	22.58	23.91	25.24	63.75
$1\frac{5}{8}$	16.58	17.96	19.34	20.72	22.10	23.48	24.87	26.25	66.30
$1\frac{11}{16}$	17.22	18.65	20.08	21.51	22.95	24.38	25.82	27.26	68.85
$1\frac{3}{4}$	17.85	19.34	20.83	22.32	23.80	25.29	26.78	28.27	71.40
$1\frac{13}{16}$	18.49	20.03	21.57	23.11	24.65	26.19	27.73	29.27	73.95
$1\frac{7}{8}$	19.13	20.72	22.31	23.91	25.50	27.10	28.69	30.28	76.50
$1\frac{15}{16}$	19.77	21.41	23.06	24.70	26.35	28.00	29.64	31.29	79.05
2	20.40	22.10	23.80	25.50	27.20	28.90	30.60	32.30	81.60

NOTE.— For plates over 13 inches in width see pages 111 to 114.

# WEIGHTS OF FLAT ROLLED STEEL PER LINEAL FOOT

(Continued)

Thickness Inches	WIDTH, INCHES								
	5	5½	5½	5¾	6	6½	6½	6¾	12
$\frac{3}{16}$	3.19	3.35	3.51	3.67	3.83	3.99	4.14	4.30	7.65
$\frac{1}{4}$	4.25	4.46	4.67	4.89	5.10	5.31	5.53	5.74	10.20
$\frac{5}{16}$	5.31	5.58	5.84	6.11	6.38	6.64	6.90	7.17	12.75
$\frac{3}{8}$	6.38	6.69	7.02	7.34	7.65	7.97	8.29	8.61	15.30
$\frac{7}{16}$	7.44	7.81	8.18	8.56	8.93	9.29	9.67	10.04	17.85
$\frac{1}{2}$	8.50	8.93	9.35	9.77	10.20	10.63	11.05	11.48	20.40
$\frac{9}{16}$	9.57	10.04	10.53	11.00	11.48	11.95	12.43	12.91	22.95
$\frac{5}{8}$	10.63	11.16	11.69	12.22	12.75	13.28	13.81	14.34	25.50
$\frac{11}{16}$	11.69	12.27	12.85	13.44	14.03	14.61	15.20	15.78	28.05
$\frac{3}{4}$	12.75	13.39	14.03	14.67	15.30	15.94	16.58	17.22	30.60
$\frac{13}{16}$	13.81	14.50	15.19	15.88	16.58	17.27	17.95	18.65	33.15
$\frac{7}{8}$	14.87	15.62	16.36	17.10	17.85	18.60	19.34	20.08	35.70
$\frac{15}{16}$	15.94	16.74	17.53	18.33	19.13	19.92	20.72	21.51	38.25
1	17.00	17.85	18.70	19.55	20.40	21.25	22.10	22.95	40.80
$1\frac{1}{16}$	18.06	18.96	19.87	20.77	21.68	22.58	23.48	24.39	43.35
$1\frac{1}{8}$	19.13	20.08	21.04	21.99	22.95	23.91	24.87	25.82	45.90
$1\frac{3}{16}$	20.19	21.20	22.21	23.22	24.23	25.23	26.24	27.25	48.45
$1\frac{1}{4}$	21.25	22.32	23.38	24.44	25.50	26.56	27.62	28.69	51.00
$1\frac{5}{16}$	22.32	23.43	24.54	25.66	26.78	27.90	29.01	30.12	53.55
$1\frac{3}{8}$	23.38	24.54	25.71	26.88	28.05	29.22	30.39	31.56	56.10
$1\frac{7}{16}$	24.44	25.66	26.88	28.10	29.33	30.55	31.77	32.99	58.65
$1\frac{1}{2}$	25.50	26.78	28.05	29.33	30.60	31.88	33.15	34.43	61.20
$1\frac{9}{16}$	26.57	27.89	29.22	30.55	31.88	33.20	34.53	35.86	63.75
$1\frac{5}{8}$	27.63	29.01	30.39	31.77	33.15	34.53	35.91	37.29	66.30
$1\frac{11}{16}$	28.69	30.12	31.55	32.99	34.43	35.86	37.30	38.73	68.85
$1\frac{3}{4}$	29.75	31.24	32.73	34.22	35.70	37.19	38.68	40.17	71.40
$1\frac{13}{16}$	30.81	32.35	33.89	35.43	36.98	38.52	40.05	41.60	73.95
$1\frac{7}{8}$	31.87	33.47	35.06	36.65	38.25	39.85	41.44	43.03	76.50
$1\frac{15}{16}$	32.94	34.59	36.23	37.88	39.53	41.17	42.82	44.46	79.05
2	34.00	35.70	37.40	39.10	40.80	42.50	44.20	45.90	81.60

NOTE.— For plates over 13 inches in width see pages 111 to 114.



# WEIGHTS OF FLAT ROLLED STEEL

## PER LINEAL FOOT

(Continued)

Thickness Inches	WIDTH, INCHES								
	7	7½	7½	7¾	8	8½	8½	8¾	12
$\frac{3}{16}$	4.46	4.62	4.78	4.94	5.10	5.26	5.42	5.58	7.65
$\frac{1}{4}$	5.95	6.16	6.36	6.58	6.80	7.01	7.22	7.43	10.20
$\frac{5}{16}$	7.44	7.70	7.97	8.23	8.50	8.76	9.03	9.29	12.75
$\frac{3}{8}$	8.93	9.25	9.57	9.88	10.20	10.52	10.84	11.16	15.30
$\frac{7}{16}$	10.41	10.78	11.16	11.53	11.90	12.27	12.64	13.02	17.85
$\frac{1}{2}$	11.90	12.32	12.75	13.18	13.60	14.03	14.44	14.87	20.40
$\frac{9}{16}$	13.39	13.86	14.34	14.82	15.30	15.78	16.26	16.74	22.95
$\frac{5}{8}$	14.87	15.40	15.94	16.47	17.00	17.53	18.06	18.59	25.50
$\frac{11}{16}$	16.36	16.94	17.53	18.12	18.70	19.28	19.86	20.45	28.05
$\frac{3}{4}$	17.85	18.49	19.13	19.77	20.40	21.04	21.68	22.32	30.60
$\frac{13}{16}$	19.34	20.03	20.72	21.41	22.10	22.79	23.48	24.17	33.15
$\frac{7}{8}$	20.83	21.57	22.32	23.05	23.80	24.55	25.30	26.04	35.70
$\frac{15}{16}$	22.32	23.11	23.91	24.70	25.50	26.30	27.10	27.89	38.25
1	23.80	24.65	25.50	26.35	27.20	28.05	28.90	29.75	40.80
$1\frac{1}{16}$	25.29	26.19	27.10	28.00	28.90	29.80	30.70	31.61	43.35
$1\frac{1}{8}$	26.78	27.73	28.68	29.64	30.60	31.56	32.52	33.47	45.90
$1\frac{3}{16}$	28.26	29.27	30.28	31.29	32.30	33.31	34.32	35.33	48.45
$1\frac{1}{4}$	29.75	30.81	31.88	32.94	34.00	35.06	36.12	37.20	51.00
$1\frac{5}{16}$	31.23	32.35	33.48	34.59	35.70	36.81	37.93	39.05	53.55
$1\frac{3}{8}$	32.72	33.89	35.06	36.23	37.40	38.57	39.74	40.91	56.10
$1\frac{7}{16}$	34.21	35.44	36.66	37.88	39.10	40.32	41.54	42.77	58.65
$1\frac{1}{2}$	35.70	36.98	38.26	39.53	40.80	42.08	43.35	44.63	61.20
$1\frac{9}{16}$	37.19	38.51	39.84	41.17	42.50	43.83	45.16	46.49	63.75
$1\frac{5}{8}$	38.67	40.05	41.44	42.82	44.20	45.58	46.96	48.34	66.30
$1\frac{11}{16}$	40.16	41.59	43.03	44.47	45.90	47.33	48.76	50.20	68.85
$1\frac{3}{4}$	41.65	43.14	44.63	46.12	47.60	49.09	50.58	52.07	71.40
$1\frac{13}{16}$	43.14	44.68	46.22	47.76	49.30	50.84	52.38	53.92	73.95
$1\frac{7}{8}$	44.63	46.22	47.82	49.40	51.00	52.60	54.20	55.79	76.50
$1\frac{15}{16}$	46.12	47.76	49.41	51.05	52.70	54.35	56.00	57.6	79.05
2	47.60	49.30	51.00	52.70	54.40	56.10	57.80	59.50	81.60

NOTE.— For plates over 13 inches in width see pages 111 to 114.

# WEIGHTS OF FLAT ROLLED STEEL PER LINEAL FOOT

(Continued)

Thickness Inches	WIDTH, INCHES								
	9	9½	9¾	9¾	10	10½	10¾	10¾	12
$\frac{3}{16}$	5.74	5.90	6.06	6.22	6.38	6.54	6.70	6.86	7.65
$\frac{1}{4}$	7.65	7.86	8.08	8.29	8.50	8.71	8.92	9.14	10.20
$\frac{5}{16}$	9.56	9.83	10.10	10.36	10.62	10.89	11.16	11.42	12.75
$\frac{3}{8}$	11.48	11.80	12.12	12.44	12.75	13.07	13.39	13.71	15.30
$\frac{7}{16}$	13.40	13.76	14.14	14.51	14.88	15.25	15.62	15.99	17.85
$\frac{1}{2}$	15.30	15.73	16.16	16.58	17.00	17.42	17.85	18.28	20.40
$\frac{9}{16}$	17.22	17.69	18.18	18.65	19.14	19.61	20.08	20.56	22.95
$\frac{5}{8}$	19.13	19.65	20.19	20.72	21.25	21.78	22.32	22.85	25.50
$\frac{11}{16}$	21.04	21.62	22.21	22.79	23.38	23.96	24.54	25.13	28.05
$\frac{3}{4}$	22.96	23.59	24.23	24.86	25.50	26.14	26.78	27.42	30.60
$\frac{13}{16}$	24.86	25.55	26.24	26.94	27.62	28.32	29.00	29.69	33.15
$\frac{7}{8}$	26.78	27.52	28.26	29.01	29.75	30.50	31.24	31.98	35.70
$\frac{15}{16}$	28.69	29.49	30.28	31.08	31.88	32.67	33.48	34.28	38.25
1	30.60	31.45	32.30	33.15	34.00	34.85	35.70	36.55	40.80
$1\frac{1}{16}$	32.52	33.41	34.32	35.22	36.12	37.03	37.92	38.83	43.35
$1\frac{1}{8}$	34.43	35.38	36.34	37.29	38.25	39.21	40.17	41.12	45.90
$1\frac{3}{8}$	36.34	37.35	38.36	39.37	40.38	41.39	42.40	43.40	48.45
$1\frac{1}{2}$	38.26	39.31	40.37	41.44	42.50	43.56	44.63	45.69	51.00
$1\frac{5}{8}$	40.16	41.28	42.40	43.52	44.64	45.75	46.86	47.97	53.55
$1\frac{3}{4}$	42.08	43.25	44.41	45.58	46.75	47.92	49.08	50.25	56.10
$1\frac{7}{8}$	44.00	45.22	46.44	47.66	48.88	50.10	51.32	52.54	58.65
$1\frac{1}{2}$	45.90	47.18	48.45	49.73	51.00	52.28	53.55	54.83	61.20
$1\frac{9}{8}$	47.82	49.14	50.48	51.80	53.14	54.46	55.78	57.11	63.75
$1\frac{5}{4}$	49.73	51.10	52.49	53.87	55.25	56.63	58.02	59.40	66.30
$1\frac{11}{8}$	51.64	53.07	54.51	55.94	57.38	58.81	60.24	61.68	68.85
$1\frac{3}{4}$	53.56	55.04	56.53	58.01	59.50	60.99	62.48	63.97	71.40
$1\frac{13}{8}$	55.46	57.00	58.54	60.09	61.62	63.17	64.70	66.24	73.95
$1\frac{7}{4}$	57.38	58.97	60.56	62.16	63.75	65.35	66.94	68.53	76.50
$1\frac{15}{8}$	59.29	60.94	62.58	64.23	65.88	67.52	69.18	70.83	79.05
2	61.20	62.90	64.60	66.30	68.00	69.70	71.40	73.10	81.60

NOTE.— For plates over 13 inches in width see pages 111 to 114.

# WEIGHTS OF FLAT ROLLED STEEL PER LINEAL FOOT

(Concluded)

Thickness Inches	WIDTH, INCHES								
	11	11 $\frac{1}{4}$	11 $\frac{1}{2}$	11 $\frac{3}{4}$	12	12 $\frac{1}{4}$	12 $\frac{1}{2}$	12 $\frac{3}{4}$	13
$\frac{1}{16}$	7.02	7.17	7.32	7.49	7.65	7.82	7.98	8.13	8.28
$\frac{1}{8}$	9.34	9.57	9.78	10.00	10.20	10.42	10.63	10.84	11.05
$\frac{5}{16}$	11.68	11.95	12.22	12.49	12.75	13.01	13.28	13.55	13.81
$\frac{3}{8}$	14.03	14.35	14.68	14.99	15.30	15.62	15.94	16.26	16.58
$\frac{7}{16}$	16.36	16.74	17.12	17.49	17.85	18.23	18.60	18.97	19.34
$\frac{1}{2}$	18.70	19.13	19.55	19.97	20.40	20.82	21.25	21.67	22.10
$\frac{9}{16}$	21.02	21.51	22.00	22.48	22.95	23.43	23.90	24.39	24.86
$\frac{5}{8}$	23.38	23.91	24.44	24.97	25.50	26.03	26.56	27.09	27.62
$\frac{11}{16}$	25.70	26.30	26.88	27.47	28.05	28.64	29.22	29.80	30.39
$\frac{3}{4}$	28.05	28.68	29.33	29.97	30.60	31.25	31.88	32.52	33.16
$\frac{13}{16}$	30.40	31.08	31.76	32.46	33.15	33.83	34.53	35.22	35.91
$\frac{7}{8}$	32.72	33.47	34.21	34.95	35.70	36.44	37.19	37.93	38.68
$\frac{15}{16}$	35.06	35.86	36.66	37.46	38.25	39.05	39.84	40.64	41.44
1	37.40	38.25	39.10	39.95	40.80	41.65	42.50	43.35	44.20
1 $\frac{1}{16}$	39.74	40.64	41.54	42.45	43.35	44.25	45.16	46.06	46.96
1 $\frac{1}{8}$	42.08	43.04	44.00	44.94	45.90	46.86	47.82	48.77	49.72
1 $\frac{3}{16}$	44.42	45.42	46.44	47.45	48.45	49.46	50.46	51.48	52.48
1 $\frac{1}{4}$	46.76	47.82	48.88	49.94	51.00	52.06	53.12	54.19	55.25
1 $\frac{5}{16}$	49.08	50.20	51.32	52.44	53.55	54.67	55.78	56.90	58.02
1 $\frac{3}{8}$	51.42	52.59	53.76	54.93	56.10	57.27	58.44	59.60	60.77
1 $\frac{7}{16}$	53.76	54.99	56.21	57.43	58.65	59.87	61.10	62.32	63.54
1 $\frac{1}{2}$	56.10	57.37	58.65	59.93	61.20	62.48	63.75	65.03	66.30
1 $\frac{9}{16}$	58.42	59.76	61.10	62.43	63.75	65.08	66.40	67.74	69.06
1 $\frac{5}{8}$	60.78	62.16	63.54	64.92	66.30	67.68	69.06	70.44	71.83
1 $\frac{11}{16}$	63.10	64.55	65.98	67.42	68.85	70.29	71.72	73.15	74.59
1 $\frac{3}{4}$	65.45	66.93	68.43	69.92	71.40	72.90	74.38	75.87	77.35
1 $\frac{13}{16}$	67.80	69.33	70.86	72.41	73.95	75.48	77.03	78.57	80.11
1 $\frac{7}{8}$	70.12	71.72	73.31	74.90	76.50	78.09	79.69	81.28	82.88
1 $\frac{15}{16}$	72.46	74.11	75.76	77.41	79.05	80.70	82.34	83.99	85.64
2	74.80	76.50	78.20	79.90	81.60	83.30	85.00	86.70	88.40

NOTE.— For plates over 13 inches in width see pages 111 to 114.

# ROUND EDGE FLATS

MEASURED OVER ALL

Width, Inches	Thickness, Inches	Width, Inches	Thickness, Inches
$\frac{1}{2}$	$\frac{1}{8}$ to $\frac{5}{16}$	$1\frac{15}{16}$	$\frac{1}{4}$ to 1
$\frac{9}{16}$	$\frac{1}{8}$ to $\frac{5}{16}$	2	$\frac{1}{4}$ to 1
$\frac{5}{8}$	$\frac{1}{8}$ to $\frac{5}{16}$	$2\frac{1}{16}$	$\frac{1}{4}$ to 1
$\frac{11}{16}$	$\frac{1}{8}$ to $\frac{3}{8}$	$2\frac{1}{8}$	$\frac{1}{4}$ to 1
$\frac{3}{4}$	$\frac{1}{8}$ to $\frac{3}{8}$	$2\frac{3}{16}$	$\frac{1}{4}$ to 1
$\frac{13}{16}$	$\frac{1}{8}$ to $\frac{7}{16}$	$2\frac{1}{4}$	$\frac{1}{4}$ to 1
$\frac{7}{8}$	$\frac{1}{8}$ to $\frac{7}{16}$	$2\frac{5}{16}$	$\frac{1}{4}$ to 1
$\frac{15}{16}$	$\frac{1}{8}$ to $\frac{1}{2}$	$2\frac{3}{8}$	$\frac{1}{4}$ to 1
1	$\frac{1}{8}$ to $\frac{1}{2}$	$2\frac{7}{16}$	$\frac{1}{4}$ to 1
$1\frac{1}{16}$	$\frac{1}{8}$ to $\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$ to 1
$1\frac{1}{8}$	$\frac{3}{16}$ to $\frac{1}{2}$	$2\frac{5}{8}$	$\frac{1}{4}$ to 1
$1\frac{3}{16}$	$\frac{3}{16}$ to $\frac{3}{4}$	$2\frac{3}{4}$	$\frac{1}{4}$ to 1
$1\frac{1}{4}$	$\frac{3}{16}$ to $\frac{3}{4}$	$2\frac{7}{8}$	$\frac{1}{4}$ to 1
$1\frac{5}{16}$	$\frac{3}{16}$ to $\frac{3}{4}$	3	$\frac{1}{4}$ to 1
$1\frac{3}{8}$	$\frac{3}{16}$ to $\frac{3}{4}$	$3\frac{1}{8}$	$\frac{1}{4}$ to 1
$1\frac{7}{16}$	$\frac{3}{16}$ to $\frac{3}{4}$	$3\frac{1}{4}$	$\frac{1}{4}$ to 1
$1\frac{1}{2}$	$\frac{3}{16}$ to $\frac{3}{4}$	$3\frac{3}{8}$	$\frac{1}{4}$ to 1
$1\frac{9}{16}$	$\frac{3}{16}$ to $\frac{3}{4}$	$3\frac{1}{2}$	$\frac{1}{4}$ to 1
$1\frac{5}{8}$	$\frac{3}{16}$ to $\frac{3}{4}$	$3\frac{5}{8}$	$\frac{3}{8}$ to 1
$1\frac{11}{16}$	$\frac{3}{16}$ to $\frac{3}{4}$	$3\frac{3}{4}$	$\frac{3}{8}$ to 1
$1\frac{3}{4}$	$\frac{3}{16}$ to 1	$3\frac{7}{8}$	$\frac{3}{8}$ to 1
$1\frac{13}{16}$	$\frac{1}{4}$ to 1	4	$\frac{3}{8}$ to 1
$1\frac{7}{8}$	$\frac{1}{4}$ to 1		

For weights see pages 131 and 132.



# ROUND EDGE TIRE

## MEASURED ON THE FACE

Width, Inches	Thickness, Inches	Width, Inches	Thickness, Inches
$\frac{1}{2}$	$\frac{1}{8}$ to $\frac{5}{16}$	$1\frac{15}{16}$	$\frac{1}{4}$ to 1
$\frac{9}{16}$	$\frac{1}{8}$ to $\frac{5}{16}$	2	$\frac{1}{4}$ to 1
$\frac{5}{8}$	$\frac{1}{8}$ to $\frac{5}{16}$	$2\frac{1}{16}$	$\frac{1}{4}$ to 1
$\frac{11}{16}$	$\frac{1}{8}$ to $\frac{3}{8}$	$2\frac{1}{8}$	$\frac{1}{4}$ to 1
$\frac{3}{4}$	$\frac{1}{8}$ to $\frac{3}{8}$	$2\frac{3}{16}$	$\frac{1}{4}$ to 1
$\frac{13}{16}$	$\frac{1}{8}$ to $\frac{7}{16}$	$2\frac{1}{4}$	$\frac{1}{4}$ to 1
$\frac{7}{8}$	$\frac{1}{8}$ to $\frac{7}{16}$	$2\frac{5}{16}$	$\frac{1}{4}$ to 1
$\frac{15}{16}$	$\frac{1}{8}$ to $\frac{1}{2}$	$2\frac{3}{8}$	$\frac{1}{4}$ to 1
1	$\frac{1}{8}$ to $\frac{1}{2}$	$2\frac{7}{16}$	$\frac{1}{4}$ to 1
$1\frac{1}{16}$	$\frac{1}{8}$ to $\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$ to 1
$1\frac{1}{8}$	$\frac{3}{16}$ to $\frac{1}{2}$	$2\frac{5}{8}$	$\frac{1}{4}$ to 1
$1\frac{3}{16}$	$\frac{3}{16}$ to $\frac{1}{2}$	$2\frac{3}{4}$	$\frac{1}{4}$ to 1
$1\frac{1}{4}$	$\frac{3}{16}$ to $\frac{1}{2}$	$2\frac{7}{8}$	$\frac{1}{4}$ to 1
$1\frac{5}{16}$	$\frac{3}{16}$ to $\frac{1}{2}$	3	$\frac{1}{4}$ to 1
$1\frac{3}{8}$	$\frac{3}{16}$ to $\frac{1}{2}$	$3\frac{1}{8}$	$\frac{1}{4}$ to 1
$1\frac{7}{16}$	$\frac{3}{16}$ to $\frac{1}{2}$	$3\frac{1}{4}$	$\frac{1}{4}$ to 1
$1\frac{1}{2}$	$\frac{3}{16}$ to $\frac{1}{2}$	$3\frac{3}{8}$	$\frac{1}{4}$ to 1
$1\frac{9}{16}$	$\frac{3}{16}$ to $\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{4}$ to 1
$1\frac{5}{8}$	$\frac{3}{16}$ to $\frac{1}{2}$	$3\frac{5}{8}$	$\frac{3}{8}$ to 1
$1\frac{11}{16}$	$\frac{3}{16}$ to $\frac{1}{2}$	$3\frac{3}{4}$	$\frac{3}{8}$ to 1
$1\frac{3}{4}$	$\frac{3}{16}$ to 1	$3\frac{7}{8}$	$\frac{3}{8}$ to 1
$1\frac{13}{16}$	$\frac{1}{2}$ to 1	4	$\frac{3}{8}$ to 1
$1\frac{7}{8}$	$\frac{1}{2}$ to 1		

For weights see pages 133 and 134.



# **APPROXIMATE WEIGHTS OF ROUND EDGE FLATS PER LINEAL FOOT**

Width Over All, Inches	THICKNESS, INCHES						
	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
$\frac{1}{8}$	.206	.303	.398	.488			
$\frac{1}{16}$	.232	.343	.451	.555			
$\frac{1}{4}$	.259	.383	.504	.621			
$\frac{3}{8}$	.285	.423	.557	.688	.815		
$\frac{1}{2}$	.312	.463	.610	.754	.895		
$\frac{5}{8}$	.338	.503	.663	.821	.974	1.13	
$\frac{3}{4}$	.365	.542	.716	.887	1.06	1.22	
$\frac{7}{8}$	.392	.582	.769	.953	1.14	1.31	1.49
1	.418	.622	.823	1.02	1.22	1.41	1.59
$1\frac{1}{8}$	.445	.662	.876	1.09	1.30	1.50	1.70
$1\frac{1}{4}$		.702	.929	1.15	1.38	1.59	1.81
$1\frac{1}{2}$		.742	.982	1.22	1.46	1.69	1.91
$1\frac{3}{4}$		.781	1.04	1.29	1.54	1.78	2.02
$1\frac{5}{8}$		.821	1.09	1.36	1.62	1.87	2.13
$1\frac{7}{8}$		.861	1.14	1.42	1.70	1.97	2.23
$1\frac{9}{8}$		.901	1.19	1.49	1.78	2.06	2.34
$1\frac{11}{8}$		.941	1.25	1.56	1.85	2.15	2.44
$1\frac{13}{8}$		.981	1.30	1.62	1.94	2.24	2.55
$1\frac{15}{8}$		1.02	1.35	1.69	2.01	2.34	2.66
$1\frac{17}{8}$		1.06	1.41	1.76	2.09	2.43	2.76
$1\frac{19}{8}$		1.10	1.46	1.82	2.17	2.52	2.87
$1\frac{21}{8}$			1.51	1.89	2.25	2.62	2.98
$1\frac{23}{8}$			1.57	1.95	2.33	2.71	3.08
$1\frac{25}{8}$			1.62	2.02	2.41	2.80	3.19
2			1.67	2.09	2.49	2.89	3.29
$2\frac{1}{8}$			1.73	2.15	2.57	2.99	3.40
$2\frac{1}{4}$			1.78	2.22	2.65	3.08	3.51
$2\frac{1}{2}$			1.83	2.29	2.73	3.17	3.61
$2\frac{3}{4}$			1.89	2.35	2.81	3.27	3.72
$2\frac{5}{8}$			1.94	2.42	2.89	3.36	3.83
$2\frac{7}{8}$			1.99	2.49	2.97	3.45	3.93
$2\frac{9}{8}$			2.04	2.55	3.05	3.55	4.04
$2\frac{11}{8}$			2.10	2.62	3.13	3.64	4.14
$2\frac{13}{8}$			2.20	2.75	3.29	3.82	4.36
$2\frac{15}{8}$			2.31	2.88	3.45	4.01	4.57
$2\frac{17}{8}$			2.42	3.02	3.61	4.20	4.78
3			2.52	3.15	3.77	4.38	4.99
$3\frac{1}{8}$			2.63	3.28	3.93	4.57	5.21
$3\frac{1}{4}$			2.74	3.42	4.09	4.75	5.42
$3\frac{1}{2}$			2.84	3.55	4.25	4.94	5.63
$3\frac{3}{4}$			2.95	3.68	4.40	5.13	5.84
$3\frac{5}{8}$					4.56	5.31	6.06
$3\frac{7}{8}$					4.72	5.50	6.27
$3\frac{9}{8}$					4.88	5.68	6.48
4					5.04	5.87	6.69

# **APPROXIMATE WEIGHTS OF ROUND EDGE FLATS—(Continued) PER LINEAL FOOT**

Width Over All, Inches	THICKNESS, INCHES							
	$\frac{1}{16}$	$\frac{5}{64}$	$\frac{11}{64}$	$\frac{3}{4}$	$\frac{13}{64}$	$\frac{7}{8}$	$\frac{15}{16}$	1
$\frac{1}{8}$								
$\frac{1}{8}$								
$\frac{1}{8}$								
$\frac{1}{8}$								
$\frac{1}{8}$								
$\frac{1}{8}$								
1								
$1\frac{1}{8}$								
$1\frac{1}{8}$								
$1\frac{1}{8}$	2.14	2.36	2.57	.279				
$1\frac{1}{8}$	2.26	2.49	2.72	.294				
$1\frac{1}{8}$								
$1\frac{1}{8}$	2.38	2.62	2.81	3.10				
$1\frac{1}{8}$	2.49	2.75	3.01	3.26				
$1\frac{1}{8}$	2.61	2.89	3.16	3.42				
$1\frac{1}{8}$	2.73	3.02	3.30	3.58				
$1\frac{1}{8}$								
$1\frac{1}{8}$	2.85	3.15	3.45	3.74				
$1\frac{1}{8}$	2.97	3.29	3.60	3.90				
$1\frac{1}{8}$	3.09	3.42	3.74	4.06				
$1\frac{1}{8}$	3.21	3.55	3.89	4.22	4.55	4.87	5.20	5.52
$1\frac{1}{8}$								
$1\frac{1}{8}$	3.33	3.68	4.03	4.38	4.72	5.06	5.40	5.73
$1\frac{1}{8}$	3.45	3.82	4.18	4.54	4.89	5.25	5.60	5.94
$1\frac{1}{8}$	3.57	3.95	4.33	4.70	5.07	5.43	5.79	6.15
2	3.69	4.08	4.47	4.86	5.24	5.62	5.99	6.37
$2\frac{1}{8}$								
$2\frac{1}{8}$	3.81	4.22	4.62	5.02	5.41	5.80	6.19	6.58
$2\frac{1}{8}$	3.93	4.35	4.76	5.18	5.58	5.99	6.39	6.79
$2\frac{1}{8}$	4.05	4.48	4.91	5.34	5.76	6.18	6.59	7.00
$2\frac{1}{8}$	4.17	4.61	5.06	5.49	5.93	6.36	6.79	7.22
$2\frac{1}{8}$								
$2\frac{1}{8}$	4.29	4.75	5.20	5.65	6.10	6.55	6.99	7.43
$2\frac{1}{8}$	4.41	4.88	5.35	5.81	6.28	6.73	7.19	7.64
$2\frac{1}{8}$	4.53	5.01	5.49	5.97	6.45	6.92	7.39	7.85
$2\frac{1}{8}$	4.65	5.15	5.64	6.13	6.62	7.10	7.59	8.07
$2\frac{1}{8}$								
$2\frac{1}{8}$	4.89	5.41	5.93	6.45	6.97	7.48	7.99	8.49
$2\frac{1}{8}$	5.12	5.68	6.22	6.77	7.31	7.85	8.39	8.92
$2\frac{1}{8}$	5.36	5.94	6.52	7.09	7.66	8.22	8.78	9.34
3	5.60	6.21	6.81	7.41	8.00	8.59	9.18	9.77
$3\frac{1}{8}$								
$3\frac{1}{8}$	5.84	6.47	7.10	7.73	8.35	8.96	9.58	10.19
$3\frac{1}{8}$	6.08	6.74	7.39	8.04	8.69	9.34	9.98	10.62
$3\frac{1}{8}$	6.19	7.00	7.69	8.36	9.04	9.71	10.38	11.04
$3\frac{1}{8}$	6.56	7.27	7.98	8.68	9.38	10.08	10.77	11.47
$3\frac{1}{8}$								
$3\frac{1}{8}$	6.80	7.54	8.27	9.00	9.73	10.45	11.17	11.89
$3\frac{1}{8}$	7.04	7.80	8.56	9.32	10.07	10.82	11.57	12.32
$3\frac{1}{8}$	7.28	8.07	8.85	9.64	10.42	11.20	11.97	12.74
4	7.51	8.33	9.15	9.96	10.76	11.57	12.37	13.17

# **APPROXIMATE WEIGHTS OF ROUND EDGE TIRES PER LINEAL FOOT**

Face Measure, Inches	THICKNESS, INCHES						
	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
$\frac{1}{8}$	.228	.353	.486	.626			
$\frac{9}{16}$	.254	.393	.539	.692			
$\frac{11}{16}$	.281	.433	.592	.759			
$\frac{13}{16}$	.307	.472	.645	.825	1.01		
$\frac{1}{2}$	.334	.512	.698	.892	1.09		
$\frac{13}{16}$	.360	.552	.751	.958	1.18	1.40	
$\frac{1}{2}$	.387	.592	.804	1.03	1.26	1.49	
$\frac{13}{16}$	.413	.632	.858	1.10	1.34	1.58	1.84
1	.440	.672	.911	1.16	1.42	1.68	1.95
$1\frac{1}{16}$	.467	.711	.964	1.23	1.50	1.77	2.05
$1\frac{1}{8}$		.751	1.02	1.29	1.58	1.86	2.16
$1\frac{1}{4}$		.791	1.07	1.36	1.65	1.96	2.27
$1\frac{1}{2}$		.831	1.13	1.43	1.73	2.05	2.37
$1\frac{5}{8}$		.871	1.18	1.49	1.81	2.14	2.48
$1\frac{3}{4}$		.911	1.23	1.56	1.89	2.24	2.58
$1\frac{7}{8}$		.950	1.29	1.63	1.97	2.33	2.69
2		.990	1.34	1.69	2.05	2.42	2.79
$2\frac{1}{8}$		1.03	1.39	1.76	2.13	2.51	2.90
$2\frac{1}{4}$		1.07	1.45	1.83	2.21	2.61	3.01
$2\frac{1}{2}$		1.11	1.50	1.89	2.29	2.70	3.11
$2\frac{3}{4}$		1.15	1.55	1.96	2.37	2.79	3.22
$2\frac{5}{8}$			1.61	2.02	2.45	2.89	3.33
$2\frac{3}{4}$			1.66	2.09	2.53	2.98	3.43
$2\frac{7}{8}$			1.71	2.16	2.61	3.07	3.54
3			1.77	2.22	2.69	3.16	3.65
$3\frac{1}{8}$			1.82	2.29	2.77	3.25	3.75
$3\frac{1}{4}$			1.87	2.36	2.85	3.35	3.86
$3\frac{1}{2}$			1.92	2.42	2.93	3.44	3.96
$3\frac{3}{4}$			1.98	2.49	3.00	3.54	4.07
$3\frac{5}{8}$			2.03	2.56	3.09	3.63	4.18
$3\frac{3}{4}$			2.08	2.62	3.17	3.72	4.28
$3\frac{7}{8}$			2.14	2.69	3.25	3.82	4.39
4			2.19	2.76	3.35	3.91	4.49
$4\frac{1}{8}$			2.30	2.89	3.49	4.09	4.71
$4\frac{1}{4}$			2.40	3.02	3.65	4.28	4.92
$4\frac{1}{2}$			2.51	3.15	3.81	4.47	5.13
$4\frac{3}{4}$			2.61	3.29	3.97	4.65	5.35
$4\frac{5}{8}$			2.72	3.42	4.12	4.84	5.56
$4\frac{3}{4}$			2.83	3.55	4.28	5.02	5.77
$4\frac{7}{8}$			2.93	3.68	4.44	5.21	5.98
5			3.04	3.82	4.60	5.40	6.20
$5\frac{1}{8}$			3.15	3.95	4.76	5.58	6.41
$5\frac{1}{4}$			3.25	4.08	4.92	5.77	6.62
$5\frac{1}{2}$			3.36	4.22	5.08	5.95	6.83
$5\frac{3}{4}$			3.47	4.35	5.24	6.14	7.05

# **APPROXIMATE WEIGHTS OF ROUND EDGE TIRES—(Continued) PER LINEAL FOOT**

Face Measure, Inches	THICKNESS, INCHES						
	$\frac{9}{16}$	$\frac{5}{8}$	$1\frac{1}{16}$	$\frac{3}{4}$	$1\frac{3}{16}$	$\frac{7}{8}$	1
$\frac{1}{16}$							
$\frac{1}{8}$							
$\frac{1}{4}$							
$\frac{3}{8}$							
$\frac{1}{2}$							
$\frac{5}{8}$							
$\frac{3}{4}$							
$\frac{7}{8}$							
1							
$1\frac{1}{16}$							
$1\frac{1}{8}$							
$1\frac{1}{4}$	2.58	2.91	3.24	3.58			
$1\frac{3}{8}$	2.70	3.04	3.39	3.74			
$1\frac{1}{2}$							
$1\frac{5}{8}$	2.82	3.17	3.53	3.90			
$1\frac{3}{4}$	2.94	3.30	3.68	4.06			
$1\frac{7}{8}$	3.06	3.44	3.82	4.22			
2	3.18	3.57	3.97	4.38			
$2\frac{1}{16}$							
$2\frac{1}{8}$	3.30	3.70	4.12	4.53			
$2\frac{1}{4}$	3.42	3.84	4.26	4.69			
$2\frac{3}{8}$	3.54	3.97	4.41	4.85			
$2\frac{1}{2}$	3.66	4.10	4.55	5.01	5.48	5.95	6.43
$2\frac{5}{8}$							
$2\frac{3}{4}$	3.78	4.23	4.70	5.17	5.65	6.14	6.63
$2\frac{7}{8}$	3.88	4.37	4.85	5.33	5.82	6.32	6.83
3	4.02	4.50	4.99	5.49	6.00	6.51	7.03
$3\frac{1}{16}$	4.14	4.63	5.14	5.65	6.17	6.70	7.23
$3\frac{1}{8}$							
$3\frac{1}{4}$	4.26	4.77	5.28	5.81	6.34	6.88	7.43
$3\frac{3}{8}$	4.38	4.90	5.43	5.97	6.51	7.06	7.63
$3\frac{1}{2}$	4.41	5.03	5.58	6.13	6.69	7.25	7.83
$3\frac{5}{8}$	4.61	5.16	5.72	6.29	6.86	7.44	8.03
$3\frac{3}{4}$							
$3\frac{7}{8}$	4.73	5.30	5.87	6.45	7.03	7.63	8.23
4	4.85	5.43	6.01	6.61	7.21	7.81	8.43
$4\frac{1}{16}$	4.97	5.56	6.16	6.77	7.38	8.00	8.63
$4\frac{1}{8}$	5.09	5.70	6.31	6.93	7.55	8.18	8.83
$4\frac{1}{4}$							
$4\frac{3}{8}$	5.33	5.97	6.60	7.24	7.90	8.56	9.22
$4\frac{1}{2}$	5.56	6.21	6.89	7.56	8.24	8.93	9.62
$4\frac{5}{8}$	5.81	6.50	7.18	7.88	8.59	9.30	10.02
$4\frac{3}{4}$	6.05	6.77	7.47	8.20	8.93	9.67	10.42
$4\frac{7}{8}$							
5	6.29	7.03	7.77	8.52	9.28	10.04	10.82
$5\frac{1}{16}$	6.53	7.30	8.06	8.84	9.62	10.42	11.22
$5\frac{1}{8}$	6.77	7.56	8.35	9.16	9.97	10.79	11.62
$5\frac{1}{4}$	7.00	7.83	8.64	9.48	10.31	11.16	12.01
$5\frac{3}{8}$							
$5\frac{1}{2}$	7.24	8.10	8.94	9.79	10.66	11.53	12.41
$5\frac{5}{8}$	7.48	8.36	9.23	10.11	11.00	11.90	12.81
$5\frac{3}{4}$	7.72	8.63	9.52	10.43	11.35	12.28	13.21
$5\frac{7}{8}$							
6	7.96	8.89	9.81	10.75	11.69	12.65	13.61
$6\frac{1}{16}$							
$6\frac{1}{8}$							
$6\frac{1}{4}$							
$6\frac{3}{8}$							
$6\frac{1}{2}$							
$6\frac{5}{8}$							
$6\frac{3}{4}$							
$6\frac{7}{8}$							
7							



## BANDS AND HOOPS

Width, Inches	THICKNESS	
	Birmingham Gauge	Inches
$\frac{1}{2}$	19 to 13	.042 to .095
$\frac{5}{8}$	19 to 13	.042 to .095
$\frac{3}{4}$	19 to 13	.042 to .095
$\frac{7}{8}$	19 to 13	.042 to .095
1	19 to 13	.042 to .095
$1 \frac{1}{8}$	19 to 13	.042 to .095
$1 \frac{1}{4}$	19 to 13	.042 to .095
$1 \frac{3}{8}$	19 to 13	.042 to .095
$1 \frac{1}{2}$	19 to 13	.042 to .095
$1 \frac{5}{8}$	19 to 13	.042 to .095
$1 \frac{3}{4}$	19 to 13	.042 to .095
2	18 to 13	.049 to .095
$2 \frac{1}{16}$	16 to 13	.065 to .095
$2 \frac{1}{8}$	16 to 13	.065 to .095
$2 \frac{1}{4}$	16 to 13	.065 to .095
$2 \frac{3}{8}$	16 to 13	.065 to .095
$2 \frac{7}{16}$	16 to 13	.065 to .095
$2 \frac{1}{2}$	16 to 13	.065 to .095
$2 \frac{5}{8}$	16 to 13	.065 to .095
$2 \frac{3}{4}$	16 to 13	.065 to .095
3	16 to 13	.065 to .095



# APPROXIMATE WEIGHTS OF STEEL BANDS AND HOOPS PER LINEAL FOOT

Birmingham Gauge	WIDTH, INCHES					
	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$
1	.3825	.4463	.5100	.5738	.6375	.7013
2	.3621	.4225	.4828	.5432	.6035	.6639
3	.3302	.3852	.4403	.4953	.5503	.6054
4	.3035	.3540	.4046	.4552	.5058	.5563
5	.2805	.3273	.3740	.4208	.4675	.5143
6	.2588	.3020	.3451	.3882	.4314	.4745
7	.2295	.2678	.3060	.3443	.3825	.4208
8	.2104	.2424	.2805	.3156	.3506	.3857
9	.1887	.2202	.2516	.2831	.3145	.3460
10	.1709	.1993	.2278	.2563	.2848	.3132
11	.1530	.1785	.2040	.2295	.2550	.2805
12	.1390	.1621	.1853	.2085	.2316	.2548
13	.1211	.1413	.1615	.1817	.2019	.2221
14	.1058	.1235	.1411	.1587	.1764	.1940
15	.0918	.1071	.1224	.1377	.1530	.1683
16	.0829	.0967	.1105	.1243	.1381	.1519
17	.0740	.0863	.0986	.1109	.1233	.1356
18	.0625	.0729	.0833	.0937	.1041	.1145
19	.0536	.0625	.0714	.0803	.0893	.0982
20	.0446	.0521	.0595	.0669	.0744	.0818
21	.0408	.0476	.0544	.0612	.0680	.0748
22	.0357	.0417	.0476	.0536	.0595	.0655
23	.0319	.0372	.0425	.0478	.0531	.0584
24	.0281	.0327	.0374	.0421	.0468	.0514
Inches						
$\frac{1}{32}$	.0398	.0464	.0503	.0597	.0663	.0729
$\frac{3}{64}$	.0597	.0696	.0796	.0895	.0995	.1094
$\frac{1}{16}$	.0797	.0930	.1063	.1196	.1328	.1461
$\frac{5}{64}$	.0996	.1162	.1328	.1494	.1660	.1826
$\frac{3}{32}$	.1195	.1394	.1593	.1792	.1991	.2191
$\frac{1}{8}$	.1394	.1626	.1858	.2091	.2323	.2555
$\frac{1}{4}$	.1594	.1860	.2125	.2391	.2657	.2922
$\frac{3}{8}$	.1793	.2092	.2390	.2689	.2988	.3286
$\frac{5}{16}$	.1992	.2324	.2656	.2988	.3319	.3651
$\frac{11}{16}$	.2191	.2555	.2921	.3286	.3651	.4016
$\frac{3}{4}$	.2391	.2789	.3188	.3586	.3984	.4383

**APPROXIMATE WEIGHTS OF STEEL BANDS  
AND HOOPS — (Continued)  
PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	1	$1\frac{1}{16}$
1	.7650	.8288	.8925	.9563	1.0200	1.0838
2	.7242	.7846	.8449	.9053	.9656	1.0260
3	.6604	.7155	.7705	.8255	.8806	.9356
4	.6069	.6575	.7081	.7586	.8092	.8598
5	.5610	.6078	.6545	.7013	.7480	.7948
6	.5177	.5608	.6039	.6471	.6902	.7333
7	.4590	.4973	.5355	.5738	.6120	.6503
8	.4208	.4558	.4909	.5259	.5610	.5961
9	.3774	.4089	.4403	.4718	.5032	.5347
10	.3417	.3702	.3987	.4271	.4556	.4841
11	.3060	.3315	.3570	.3825	.4080	.4355
12	.2780	.3011	.3243	.3474	.3706	.3938
13	.2423	.2624	.2826	.3028	.3230	.3432
14	.2117	.2293	.2469	.2646	.2822	.2998
15	.1836	.1989	.2142	.2295	.2448	.2601
16	.1658	.1796	.1934	.2072	.2210	.2348
17	.1479	.1602	.1726	.1849	.1972	.2095
18	.1250	.1354	.1458	.1562	.1666	.1770
19	.1071	.1160	.1250	.1339	.1428	.1517
20	.0893	.0967	.1041	.1116	.1190	.1264
21	.0816	.0884	.0952	.1020	.1088	.1156
22	.0714	.0774	.0833	.0893	.0952	.1012
23	.0638	.0691	.0744	.0797	.0850	.0903
24	.0561	.0608	.0655	.0701	.0748	.0795
Inches						
$\frac{1}{32}$	.0796	.0862	.0929	.0995	.1061	.1127
$\frac{3}{64}$	.1193	.1293	.1392	.1492	.1591	.1691
$\frac{1}{16}$	.1594	.1727	.1860	.1992	.2125	.2258
$\frac{5}{64}$	.1992	.2158	.2323	.2489	.2655	.2821
$\frac{3}{32}$	.2384	.2589	.2788	.2987	.3186	.3385
$\frac{7}{64}$	.2781	.3020	.3252	.3484	.3716	.3949
$\frac{1}{8}$	.3188	.3453	.3719	.3985	.4250	.4516
$\frac{9}{64}$	.3585	.3884	.4183	.4482	.4780	.5079
$\frac{5}{32}$	.3983	.4315	.4647	.4979	.5311	.5643
$\frac{11}{64}$	.4381	.4746	.5111	.5476	.5841	.6206
$\frac{3}{16}$	.4781	.5180	.5578	.5977	.6375	.6773

# **APPROXIMATE WEIGHTS OF STEEL BANDS AND HOOPS — (Continued) PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	$1\frac{1}{8}$	$1\frac{3}{16}$	$1\frac{1}{4}$	$1\frac{5}{16}$	$1\frac{3}{8}$	$1\frac{7}{16}$
1	1.1475	1.2113	1.2750	1.3388	1.4025	1.4663
2	1.0863	1.1467	1.2070	1.2674	1.3277	1.3881
3	.9907	1.0457	1.1008	1.1558	1.2108	1.2659
4	.9104	.9609	1.0115	1.0621	1.1127	1.1632
5	.8416	.8883	.9350	.9818	1.0285	1.0753
6	.7765	.8196	.8628	.9059	.9490	.9922
7	.6885	.7268	.7650	.8033	.8415	.8798
8	.6311	.6662	.7013	.7363	.7714	.8064
9	.5661	.5976	.6290	.6605	.6919	.7234
10	.5126	.5410	.5695	.5980	.6265	.6549
11	.4590	.4845	.5100	.5355	.5610	.5865
12	.4169	.4401	.4633	.4864	.5096	.5327
13	.3634	.3836	.4038	.4239	.4441	.4643
14	.3175	.3351	.3528	.3704	.3880	.4057
15	.2754	.2907	.3060	.3213	.3366	.3519
16	.2486	.2624	.2763	.2901	.3039	.3177
17	.2219	.2342	.2465	.2588	.2712	.2835
18	.1874	.1978	.2083	.2187	.2291	.2395
19	.1607	.1596	.1785	.1874	.1964	.2053
20	.1339	.1413	.1488	.1562	.1636	.1711
21	.1224	.1292	.1360	.1428	.1496	.1564
22	.1071	.1131	.1190	.1250	.1309	.1369
23	.0956	.1009	.1063	.1116	.1169	.1222
24	.0842	.0888	.0935	.0982	.1029	.1075
Inches						
$\frac{1}{32}$	.1194	.1260	.1326	.1393	.1459	.1525
$\frac{3}{64}$	.1790	.1890	.1989	.2088	.2188	.2287
$\frac{1}{16}$	.2391	.2524	.2656	.2789	.2922	.3055
$\frac{5}{64}$	.2987	.3153	.3319	.3485	.3652	.3817
$\frac{3}{32}$	.3584	.3783	.3983	.4182	.4381	.4580
$\frac{7}{64}$	.4181	.4413	.4645	.4878	.5110	.5342
$\frac{1}{8}$	.4782	.5047	.5313	.5578	.5844	.6110
$\frac{9}{64}$	.5378	.5677	.5975	.6274	.6573	.6872
$\frac{5}{32}$	.5975	.6307	.6639	.6971	.7302	.7634
$\frac{11}{64}$	.6571	.6936	.7301	.7667	.8032	.8397
$\frac{3}{16}$	.7172	.7570	.7969	.8367	.8766	.9164

# **APPROXIMATE WEIGHTS OF STEEL BANDS AND HOOPS — (Continued) PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	$1\frac{1}{2}$	$1\frac{9}{16}$	$1\frac{5}{8}$	$1\frac{11}{16}$	$1\frac{3}{4}$	$1\frac{13}{16}$
1	1.5300	1.5938	1.6575	1.7213	1.7850	1.8488
2	1.4484	1.5088	1.5691	1.6295	1.6898	1.7502
3	1.3209	1.3759	1.4310	1.4860	1.5411	1.5961
4	1.2138	1.2644	1.3150	1.3655	1.4161	1.4667
5	1.1220	1.1688	1.2155	1.2623	1.3090	1.3558
6	1.0353	1.0784	1.1216	1.1647	1.2079	1.2510
7	.9180	.9563	.9945	1.0328	1.0710	1.3019
8	.8415	.8766	.9116	.9467	.9818	1.0168
9	.7548	.7862	.8177	.8492	.8806	.9121
10	.6834	.7119	.7404	.7588	.7973	.8258
11	.6120	.6375	.6630	.6885	.7140	.7395
12	.5559	.5791	.6022	.6254	.6486	.6717
13	.4845	.5047	.5249	.5451	.5653	.5854
14	.4233	.4409	.4586	.4762	.4939	.5115
15	.3672	.3825	.3978	.4131	.4284	.4437
16	.3315	.3453	.3591	.3729	.3868	.4006
17	.2958	.3081	.3205	.3328	.3451	.3574
18	.2499	.2603	.2707	.2811	.2916	.3020
19	.2142	.2231	.2321	.2410	.2499	.2588
20	.1785	.1859	.1934	.2008	.2083	.2157
21	.1632	.1700	.1768	.1836	.1904	.1972
22	.1428	.1488	.1547	.1607	.1666	.1726
23	.1275	.1328	.1381	.1434	.1488	.1541
24	.1122	.1169	.1216	.1262	.1309	.1356
Inches						
$\frac{1}{32}$	.1591	.1658	.1724	.1790	.1857	.1923
$\frac{3}{64}$	.2387	.2486	.2586	.2685	.2785	.2884
$\frac{1}{16}$	.3188	.3321	.3453	.3586	.3719	.3852
$\frac{5}{64}$	.3983	.4149	.4315	.4481	.4647	.4813
$\frac{3}{32}$	.4779	.4978	.5177	.5376	.5575	.5775
$\frac{7}{64}$	.5574	.5807	.6039	.6271	.6504	.6736
$\frac{1}{8}$	.6375	.6641	.6906	.7172	.7438	.7703
$\frac{9}{64}$	.7170	.7469	.7768	.8067	.8365	.8664
$\frac{5}{32}$	.7966	.8298	.8630	.8962	.9294	.9626
$\frac{11}{64}$	.8762	.9127	.9492	.9857	1.0222	1.0587
$\frac{3}{16}$	.9563	.9961	1.0359	1.0758	1.1156	1.1555



**APPROXIMATE WEIGHTS OF STEEL BANDS  
AND HOOPS — (Continued)  
PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	$1\frac{1}{8}$	$1\frac{1}{16}$	2	$2\frac{1}{16}$	$2\frac{1}{8}$	$2\frac{3}{16}$
1	1.9125	1.9763	2.0400	2.1038	2.1675	2.2313
2	1.8105	1.8709	1.9312	1.9916	2.0519	2.1123
3	1.6511	1.7062	1.7612	1.8163	2.8713	1.9263
4	1.5173	1.5678	1.6184	1.6690	1.7196	1.7701
5	1.4025	1.4493	1.4960	1.5428	1.5895	1.6363
6	1.2941	1.3373	1.3804	1.4235	1.4667	1.5098
7	1.1475	1.1858	1.2240	1.2623	1.3005	1.3388
8	1.0519	1.0869	1.1220	1.1571	1.1921	1.2272
9	.9435	.9750	1.0064	1.0379	1.0693	1.1008
10	.8543	.8827	.9112	.9397	.9682	.9966
11	.7650	.7905	.8160	.8415	.8670	.8925
12	.6949	.7180	.7412	.7644	.7875	.8107
13	.6056	.6258	.6460	.6662	.6864	.7066
14	.5291	.5468	.5644	.5820	.5997	.6173
15	.4590	.4743	.4896	.5049	.5202	.5355
16	.4144	.4282	.4420	.4558	.4696	.4834
17	.3698	.3821	.3944	.4067	.4191	.4314
18	.3124	.3228	.3332	.3436	.3540	.3644
19	.2678	.2767	.2856	.2945	.3035	.3124
20	.2231	.2306	.2380	.2454	.2529	.2603
21	.2040	.2108	.2176	.2244	.2312	.2380
22	.1785	.1845	.1904	.1964	.2023	.2083
23	.1594	.1647	.1700	.1753	.1806	.1859
24	.1403	.1449	.1496	.1543	.1590	.1636
Inches						
$\frac{1}{32}$	.1989	.2056	.2122	.2188	.2254	.2321
$\frac{3}{64}$	.2984	.3083	.3182	.3282	.3381	.3481
$\frac{1}{16}$	.3985	.4117	.4250	.4383	.4516	.4649
$\frac{5}{64}$	.4979	.5145	.5311	.5477	.5643	.5809
$\frac{3}{32}$	.5974	.6173	.6372	.6571	.6770	.6969
$\frac{7}{64}$	.6968	.7200	.7432	.7665	.7897	.8129
$\frac{1}{8}$	.7969	.8235	.8500	.8766	.9032	.9297
$\frac{9}{64}$	.8963	.9262	.9561	.9859	1.0158	1.0457
$\frac{5}{32}$	.9958	1.0290	1.0622	1.0954	1.1286	1.1618
$\frac{11}{64}$	1.0952	1.1318	1.1682	1.2047	1.2412	1.2777
$\frac{3}{16}$	1.1953	1.2352	1.2750	1.3141	1.3547	1.3945



# **APPROXIMATE WEIGHTS OF STEEL BANDS AND HOOPS — (Continued) PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	2 $\frac{1}{4}$	2 $\frac{5}{16}$	2 $\frac{3}{8}$	2 $\frac{7}{16}$	2 $\frac{1}{2}$	2 $\frac{9}{16}$
1	2.2950	2.3588	2.4245	2.4863	2.5500	2.6138
2	2.1726	2.2330	2.2933	2.3537	2.4140	2.4744
3	1.9814	2.0364	2.0914	2.1465	2.2015	2.2565
4	1.8207	1.8713	1.9219	1.9724	2.0230	2.0736
5	1.6830	1.7298	1.7765	1.8233	1.8700	1.9168
6	1.5530	1.5960	1.6392	1.6824	1.7255	1.7686
7	1.3770	1.4153	1.4535	1.4918	1.5300	1.5683
8	1.2623	1.2973	1.3324	1.3674	1.4025	1.4376
9	1.1322	1.1636	1.1951	1.2266	1.2580	1.2895
10	1.0251	1.0536	1.0821	1.1105	1.1390	1.1675
11	.9180	.9435	.9690	.9945	1.0200	1.0455
12	.8339	.8570	.8802	.9033	.9265	.9497
13	.7268	.7469	.7671	.7873	.8075	.8277
14	.6350	.6526	.6702	.6879	.7055	.7231
15	.5508	.5661	.5814	.5967	.6120	.6273
16	.4973	.5111	.5249	.5387	.5525	.5663
17	.4437	.4560	.4684	.4807	.4930	.5053
18	.3749	.3853	.3957	.4061	.4165	.4269
19	.3213	.3302	.3392	.3481	.3570	.3659
20	.2678	.2752	.2826	.2901	.2975	.3049
21	.2448	.2516	.2584	.2652	.2720	.2788
22	.2142	.2202	.2261	.2321	.2380	.2440
23	.1913	.1966	.2019	.2072	.2125	.2178
24	.1683	.1730	.1777	.1823	.1870	.1917
Inches						
$\frac{1}{32}$	.2387	.2453	.2520	.2586	.2652	.2719
$\frac{3}{64}$	.3580	.3680	.3779	.3879	.3978	.4078
$\frac{1}{16}$	.4782	.4914	.5047	.5180	.5313	.5446
$\frac{5}{64}$	.5975	.6141	.6307	.6473	.6639	.6805
$\frac{3}{32}$	.7168	.7367	.7567	.7766	.7965	.8164
$\frac{7}{64}$	.8362	.8594	.8826	.9058	.9291	.9523
$\frac{1}{8}$	.9563	.9828	1.0094	1.0360	1.0625	1.0891
$\frac{9}{64}$	1.0755	1.1054	1.1360	1.1652	1.1950	1.2249
$\frac{5}{32}$	1.1949	1.2281	1.2613	1.2945	1.3277	1.3609
$\frac{11}{64}$	1.3143	1.3508	1.3873	1.4238	1.4603	1.4968
$\frac{3}{16}$	1.4344	1.4742	1.5140	1.5539	1.5938	1.6336

**APPROXIMATE WEIGHTS OF STEEL BANDS  
AND HOOPS—(Continued)  
PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	2 $\frac{5}{8}$	2 $\frac{11}{16}$	2 $\frac{1}{4}$	2 $\frac{13}{16}$	2 $\frac{7}{8}$	2 $\frac{15}{16}$
1	2.6775	2.7413	2.8050	2.8688	2.9325	2.9963
2	2.5347	2.5951	2.6554	2.7158	2.7761	2.8365
3	2.3116	2.3666	2.4217	2.4767	2.5317	2.5868
4	2.1242	2.1747	2.2253	2.2759	2.3265	2.3770
5	1.9635	2.0103	2.0570	2.1038	2.1505	2.1973
6	1.8118	1.8549	1.8981	1.9412	1.9843	1.0275
7	1.6065	1.6448	1.6830	1.7213	1.7595	1.7978
8	1.4726	1.5077	1.5428	1.5778	1.6120	1.6479
9	1.3209	1.3524	1.3838	1.4153	1.4467	1.4782
10	1.1960	1.2244	1.1529	1.2814	1.3099	1.3383
11	1.0710	1.0965	1.1220	1.1475	1.1730	1.1985
12	.9728	.9960	1.0192	1.0423	1.0655	1.0886
13	.8479	.8681	.8883	.9084	.9286	.9488
14	.7408	.7584	.7761	.7937	.8113	.8290
15	.6426	.6579	.6732	.6885	.7038	.7191
16	.5801	.5939	.6078	.6216	.6354	.6492
17	.5177	.5300	.5423	.5546	.5670	.5793
18	.4373	.4477	.4582	.4686	.4790	.4894
19	.3749	.3838	.3927	.4016	.4106	.4195
20	.3124	.3198	.3273	.3347	.3421	.3496
21	.2856	.2934	.2992	.3060	.3128	.3196
22	.2499	.2559	.2618	.2678	.2737	.2797
23	.2231	.2284	.2338	.2391	.2444	.2497
24	.1964	.2010	.2057	.2104	.2151	.2197
Inches						
$\frac{1}{32}$	.2785	.2851	.2917	.2984	.3050	.3116
$\frac{3}{64}$	.4177	.4276	.4376	.4475	.4575	.4674
$\frac{1}{16}$	.5578	.5711	.5844	.5977	.6110	.6242
$\frac{5}{64}$	.6971	.7137	.7303	.7469	.7634	.7800
$\frac{3}{32}$	.8363	.8562	.8761	.8960	.9159	.9359
$\frac{7}{64}$	.9755	.9987	1.0220	1.0452	1.0684	1.0917
$\frac{1}{8}$	1.1157	1.1422	1.1688	1.1953	1.2219	1.2485
$\frac{9}{64}$	1.2548	1.2847	1.3145	1.3444	1.3743	1.4042
$\frac{5}{32}$	1.3941	1.4273	1.4605	1.4937	1.5269	1.5601
$\frac{11}{64}$	1.5333	1.5698	1.6063	1.6428	1.6793	1.7158
$\frac{3}{16}$	1.6734	1.7133	1.7531	1.7930	1.8328	1.8726

# **APPROXIMATE WEIGHTS OF STEEL BANDS AND HOOPS—(Continued) PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	3	3 $\frac{1}{8}$	3 $\frac{1}{4}$	3 $\frac{3}{8}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$
1	3.0600	3.1875	3.3150	3.4425	3.5700	3.6975
2	2.8968	3.0175	3.1382	3.2589	3.3796	3.5003
3	2.6418	2.7519	2.8620	2.9720	3.0821	3.1922
4	2.4376	2.5288	2.6299	2.7311	2.8322	2.9334
5	2.2440	2.3375	2.4310	2.5245	2.6180	2.7115
6	2.0706	2.1569	2.2432	2.3294	2.4157	2.5020
7	1.8360	1.9125	1.9890	2.0655	2.1420	2.2185
8	1.6830	1.6531	1.8233	1.8934	1.9635	2.0336
9	1.5096	1.5725	1.6354	1.6983	1.7612	1.8241
10	1.3668	1.4238	1.4807	1.5377	1.5946	1.6516
11	1.2240	1.2750	1.3260	1.3770	1.4280	1.4790
12	1.1118	1.1581	1.2045	1.2508	1.2971	1.3434
13	.9690	1.0094	1.0498	1.0901	1.1305	1.1709
14	.8466	.8819	.9172	.9524	.9877	1.0230
15	.7344	.7650	.7956	.8262	.8568	.8874
16	.6630	.6906	.7183	.7459	.7735	.8011
17	.5916	.6163	.6409	.6656	.6902	.7149
18	.4998	.5206	.5415	.5623	.5831	.6039
19	.4284	.4463	.4641	.4820	.4998	.5177
20	.3570	.3719	.3868	.4016	.4165	.4314
21	.3264	.3400	.3536	.3672	.3808	.3944
22	.2856	.2975	.3094	.3213	.3332	.3451
23	.2550	.2656	.2763	.2869	.2975	.3081
24	.2244	.2338	.2431	.2525	.2618	.2712
Inches						
$\frac{1}{32}$	.3182	.3315	.3448	.3580	.3713	.3846
$\frac{3}{64}$	.4774	.4973	.5171	.5370	.5569	.5768
$\frac{1}{16}$	.6375	.6641	.6907	.7172	.7438	.7703
$\frac{3}{64}$	.7966	.8298	.8630	.8962	.9294	.9626
$\frac{3}{32}$	.9557	.9956	1.0354	1.0752	1.1151	1.1549
$\frac{7}{64}$	1.1149	1.1613	1.2078	1.2542	1.3007	1.3471
$\frac{1}{8}$	1.2750	1.3281	1.3813	1.4344	1.4875	1.5407
$\frac{9}{64}$	1.4341	1.4938	1.5535	1.6133	1.6730	1.7328
$\frac{5}{32}$	1.5932	1.6596	1.7260	1.7924	1.8588	1.9252
$\frac{11}{64}$	1.7524	1.8254	1.8984	1.9715	2.0445	2.1175
$\frac{3}{16}$	1.9125	1.9922	2.0719	2.1516	2.2313	2.3109



**APPROXIMATE WEIGHTS OF STEEL BANDS  
AND HOOPS—(Continued)  
PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	$3\frac{1}{4}$	$3\frac{1}{2}$	4	$4\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$
1	3.8250	3.9525	4.0800	4.3350	4.5900	4.8450
2	3.6210	3.7417	3.8624	4.1038	4.3452	4.5866
3	3.3023	3.4123	3.5224	3.7426	3.9627	4.1828
4	3.0345	3.1357	3.2368	3.4391	3.6414	3.8437
5	2.8050	2.8985	2.9920	3.1790	3.3660	3.5530
6	2.5883	2.6745	2.7608	2.9334	3.1059	3.2785
7	2.2950	2.3715	2.4480	2.6010	2.7540	2.9070
8	2.1038	2.1739	2.2440	2.3843	2.5245	2.6648
9	1.8870	1.9499	2.0128	2.1386	2.2644	2.3902
10	1.7085	1.7655	1.8224	1.9363	2.0502	2.1641
11	1.5300	1.5810	1.6320	1.7340	1.8360	1.9380
12	1.3898	1.4361	1.4824	1.5751	1.6677	1.7604
13	1.2113	1.2516	1.2920	1.3728	1.4535	1.5343
14	1.0583	1.0935	1.1288	1.1994	1.2699	1.3405
15	.9180	.9486	.9792	1.0404	1.1016	1.1628
16	.8288	.8564	.8840	.9393	.9945	1.0498
17	.7395	.7642	.7888	.8381	.8874	.9367
18	.6248	.6456	.6664	.7081	.7497	.7914
19	.5355	.5534	.5712	.6069	.6426	.6783
20	.4463	.4611	.4760	.5058	.5355	.5653
21	.4080	.4216	.4352	.4624	.4896	.5168
22	.3570	.3689	.3808	.4046	.4284	.4522
23	.3188	.3294	.3400	.3613	.3825	.4038
24	.2805	.2899	.2992	.3179	.3366	.3553
Inches						
$\frac{1}{32}$	.3978	.4111	.4243	.4509	.4774	.5039
$\frac{3}{64}$	.5967	.6166	.6365	.6763	.7060	.7558
$\frac{1}{16}$	.7969	.8235	.8500	.9032	.9563	1.0094
$\frac{5}{64}$	.9958	1.0290	1.0622	1.1286	1.1950	1.2613
$\frac{3}{32}$	1.1947	1.2345	1.2743	1.3540	1.4336	1.5133
$\frac{7}{64}$	1.3936	1.4406	1.4865	1.5794	1.6723	1.7652
$\frac{1}{8}$	1.5938	1.6469	1.7000	1.8063	1.9125	2.0188
$\frac{9}{64}$	1.7925	1.8523	1.9122	2.0316	2.1512	2.2705
$\frac{5}{32}$	1.9916	2.0579	2.1243	2.2571	2.3897	2.5227
$\frac{11}{64}$	2.1905	2.2635	2.3365	2.4826	2.6286	2.7746
$\frac{3}{16}$	2.3906	2.4703	2.5500	2.7094	2.8688	3.0281



# **APPROXIMATE WEIGHTS OF STEEL BANDS AND HOOPS—(Continued) PER LINEAL FOOT**

Birmingham Gauge	WIDTH, INCHES					
	5	5½	5½	5¾	6	6½
1	5.1000	5.3550	5.6100	5.8650	6.1200	6.3750
2	4.8280	5.0694	5.3108	5.5522	5.7936	6.0350
3	4.4030	4.6232	4.8433	5.0635	5.2836	5.5038
4	4.0460	4.2483	4.4506	4.6529	4.8552	5.0575
5	3.7400	3.9270	4.1140	4.3010	4.4880	4.6750
6	3.4510	3.6236	3.7962	3.9687	4.1412	4.3138
7	3.0600	3.2130	3.3660	3.5190	3.6720	3.8250
8	2.8050	2.9453	3.0855	3.2258	3.3660	3.5063
9	2.5160	2.6418	2.7676	2.8934	3.0192	3.1450
10	2.2780	2.3919	2.5058	2.6197	2.7336	2.8475
11	2.0400	2.1420	2.2440	2.3460	2.4480	2.5500
12	1.8530	1.9457	2.0383	2.1310	2.2236	2.3163
13	1.6150	1.6958	1.7765	1.8573	1.9380	2.0188
14	1.4110	1.4816	1.5521	1.6227	1.6932	1.7638
15	1.2240	1.2852	1.3464	1.4076	1.4688	1.5300
16	1.1050	1.1603	1.2155	1.2708	1.3260	1.3813
17	.9860	1.0353	1.0846	1.1339	1.1832	1.2325
18	.8330	.8747	.9163	.9580	.9996	1.0413
19	.7140	.7497	.7854	.8211	.8568	.8925
20	.5950	.6248	.6545	.6843	.7140	.7438
21	.5440	.5712	.5984	.6256	.6528	.6800
22	.4760	.4998	.5236	.5474	.5712	.5950
23	.4250	.4463	.4675	.4888	.5100	.5313
24	.3740	.3927	.4114	.4301	.4488	.4675
Inches						
$\frac{1}{32}$	.5304	.5569	.5835	.6100	.6365	.6630
$\frac{3}{64}$	.7956	.8354	.8752	.9149	.9547	.9945
$\frac{1}{16}$	1.0625	1.1157	1.1688	1.2219	1.2750	1.3282
$\frac{5}{64}$	1.3277	1.3941	1.4605	1.5270	1.5933	1.6596
$\frac{3}{32}$	1.5929	1.6726	1.7522	1.8319	1.9115	1.9912
$\frac{7}{64}$	1.8581	1.9510	2.0439	2.1368	2.2297	2.3226
$\frac{1}{8}$	2.1250	2.2313	2.3375	2.4438	2.5500	2.6563
$\frac{9}{64}$	2.3902	2.5096	2.6292	2.7487	2.8683	2.9877
$\frac{5}{32}$	2.6554	2.7882	2.9210	3.0547	3.1865	3.3193
$\frac{11}{64}$	2.9206	3.0667	3.2127	3.3587	3.5047	3.6508
$\frac{3}{8}$	3.1875	3.3469	3.5063	3.6656	3.8250	3.9844



**ROUNDS**



$\frac{3}{16}$ " to 1" advancing by 64ths.

  $1\frac{1}{32}$ " to 2" advancing by 32nds. 

$2\frac{1}{16}$ " to  $7\frac{5}{16}$ " advancing by 16ths.

We have grooves for rolling a large variety of bolt and rivet sizes to decimal diameters. We invite inquiry concerning these. Sizes  $\frac{3}{4}$ " and under can be furnished in coils; see page 156.

**SQUARES**

  $\frac{3}{16}$ " to 2" advancing by 64ths. 

$2\frac{1}{16}$ " to  $4\frac{1}{2}$ " advancing by 16ths.

NOTE.—All intermediate sizes can be rolled by special arrangement.

# **WEIGHTS AND AREAS OF SQUARE AND ROUND BARS AND CIRCUMFERENCES OF ROUND BARS**

ONE CUBIC FOOT OF STEEL WEIGHING 489.6 LBS.

Side or Diameter, Inches	Weight of $\square$ Bar per Foot	Weight of $\bigcirc$ Bar per Foot	Area of $\square$ Bar Square Inches	Area of $\bigcirc$ Bar Square Inches	Circumference of $\bigcirc$ Bar Inches
$\frac{1}{16}$	.013	.010	.0039	.0031	.1964
$\frac{5}{64}$	.021	.016	.0061	.0048	.2454
$\frac{3}{32}$	.030	.023	.0088	.0069	.2945
$\frac{7}{64}$	.041	.032	.0120	.0094	.3436
$\frac{1}{8}$	.053	.042	.0156	.0123	.3927
$\frac{9}{64}$	.067	.053	.0198	.0155	.4418
$\frac{5}{32}$	.083	.065	.0244	.0192	.4908
$\frac{11}{64}$	.100	.079	.0295	.0232	.5400
$\frac{3}{16}$	.120	.094	.0352	.0276	.5891
$\frac{13}{64}$	.140	.110	.0413	.0324	.6381
$\frac{7}{32}$	.163	.128	.0479	.0376	.6872
$\frac{15}{64}$	.187	.147	.0549	.0431	.7363
$\frac{1}{4}$	.212	.167	.0625	.0491	.7854
$\frac{17}{64}$	.240	.188	.0706	.0554	.8345
$\frac{9}{32}$	.269	.211	.0791	.0621	.8836
$\frac{19}{64}$	.300	.235	.0881	.0692	.9327
$\frac{5}{16}$	.332	.261	.0977	.0767	.9818
$\frac{21}{64}$	.366	.288	.1077	.0846	1.0308
$\frac{11}{32}$	.402	.316	.1182	.0928	1.0799
$\frac{23}{64}$	.439	.345	.1292	.1014	1.1290
$\frac{3}{8}$	.478	.376	.1406	.1104	1.1781
$\frac{25}{64}$	.519	.407	.1526	.1198	1.2272
$\frac{13}{32}$	.561	.441	.1650	.1296	1.2763
$\frac{27}{64}$	.605	.475	.1780	.1398	1.3254
$\frac{7}{16}$	.651	.511	.1914	.1503	1.3745
$\frac{29}{64}$	.698	.548	.2053	.1613	1.4235
$\frac{15}{32}$	.747	.587	.2197	.1726	1.4726
$\frac{31}{64}$	.798	.627	.2346	.1843	1.5217
$\frac{1}{2}$	.850	.668	.2500	.1963	1.5708
$\frac{33}{64}$	.904	.710	.2659	.2088	1.6199
$\frac{17}{32}$	.960	.754	.2822	.2217	1.6690
$\frac{35}{64}$	1.017	.799	.2991	.2349	1.7181
$\frac{9}{16}$	1.076	.845	.3164	.2485	1.7671

## SQUARE AND ROUND BARS—Continued

Side or Diameter, Inches	Weight of $\square$ Bar per Foot	Weight of $\bigcirc$ Bar per Foot	Area of $\square$ Bar Square Inches	Area of $\bigcirc$ Bar Square Inches	Circumference of $\bigcirc$ Bar Inches
$\frac{37}{64}$	1.136	.893	.3342	.2625	1.8162
$\frac{19}{32}$	1.199	.941	.3525	.2769	1.8653
$\frac{39}{64}$	1.263	.992	.3713	.2916	1.9144
$\frac{5}{8}$	1.328	1.043	.3906	.3068	1.9635
$\frac{41}{64}$	1.395	1.096	.4104	.3223	2.0126
$\frac{21}{32}$	1.464	1.150	.4307	.3382	2.0617
$\frac{43}{64}$	1.535	1.205	.4514	.3545	2.1108
$\frac{11}{16}$	1.607	1.262	.4727	.3712	2.1598
$\frac{45}{64}$	1.681	1.320	.4944	.3883	2.2089
$\frac{43}{32}$	1.756	1.379	.5166	.4057	2.2580
$\frac{47}{64}$	1.834	1.440	.5393	.4236	2.3071
$\frac{1}{2}$	1.913	1.502	.5625	.4418	2.3562
$\frac{49}{64}$	1.993	1.565	.5862	.4604	2.4053
$\frac{25}{32}$	2.075	1.630	.6103	.4794	2.4544
$\frac{51}{64}$	2.159	1.696	.6350	.4987	2.5035
$\frac{13}{16}$	2.245	1.763	.6602	.5185	2.5525
$\frac{53}{64}$	2.332	1.831	.6858	.5386	2.6016
$\frac{27}{32}$	2.420	1.901	.7119	.5591	2.6507
$\frac{55}{64}$	2.511	1.972	.7385	.5800	2.6998
$\frac{7}{8}$	2.603	2.044	.7656	.6013	2.7489
$\frac{57}{64}$	2.697	2.118	.7932	.6230	2.7980
$\frac{29}{32}$	2.792	2.193	.8213	.6450	2.8471
$\frac{59}{64}$	2.889	2.270	.8498	.6675	2.8962
$\frac{15}{16}$	2.988	2.347	.8789	.6903	2.9453
$\frac{61}{64}$	3.089	2.426	.9084	.7135	2.9943
$\frac{31}{32}$	3.191	2.506	.9385	.7371	3.0434
$\frac{63}{64}$	3.294	2.587	.9689	.7610	3.0925
1	3.400	2.670	1.0000	.7854	3.1416

## SQUARE AND ROUND BARS—Continued

Side or Diameter, Inches	Weight of $\square$ Bar per Foot	Weight of $\circ$ Bar per Foot	Area of $\square$ Bar Square Inches	Area of $\circ$ Bar Square Inches	Circumference of $\circ$ Bar Inches
$1\frac{1}{32}$	3.616	2.840	1.0635	.8353	3.2398
$\frac{1}{16}$	3.838	3.014	1.1289	.8866	3.3379
$\frac{3}{32}$	4.067	3.194	1.1963	.9396	3.4361
$\frac{1}{8}$	4.303	3.379	1.2656	.9940	3.5343
$\frac{5}{32}$	4.545	3.570	1.3369	1.0500	3.6325
$\frac{3}{16}$	4.795	3.766	1.4102	1.1075	3.7306
$\frac{7}{32}$	5.050	3.966	1.4853	1.1666	3.8288
$\frac{1}{2}$	5.312	4.173	1.5625	1.2272	3.9270
$\frac{9}{32}$	5.581	4.384	1.6416	1.2893	4.0252
$\frac{5}{16}$	5.857	4.600	1.7227	1.3530	4.1233
$\frac{11}{32}$	6.139	4.822	1.8056	1.4182	4.2215
$\frac{3}{8}$	6.428	5.049	1.8906	1.4849	4.3197
$\frac{13}{32}$	6.724	5.281	1.9775	1.5532	4.4179
$\frac{7}{16}$	7.026	5.518	2.0664	1.6230	4.5160
$\frac{15}{32}$	7.334	5.761	2.1572	1.6943	4.6142
$\frac{1}{2}$	7.650	6.008	2.2500	1.7671	4.7124
$\frac{17}{32}$	7.972	6.261	2.3447	1.8415	4.8106
$\frac{9}{16}$	8.301	6.520	2.4414	1.9175	4.9087
$\frac{19}{32}$	8.636	6.783	2.5400	1.9949	5.0069
$\frac{5}{8}$	8.978	7.051	2.6406	2.0739	5.1051
$\frac{21}{32}$	9.327	7.325	2.7431	2.1545	5.2033
$\frac{11}{16}$	9.682	7.604	2.8477	2.2365	5.3014
$\frac{23}{32}$	10.05	7.889	2.9541	2.3202	5.3996
$\frac{3}{4}$	10.41	8.178	3.0625	2.4053	5.4978
$\frac{25}{32}$	10.79	8.473	3.1728	2.4920	5.5960
$\frac{13}{16}$	11.17	8.773	3.2852	2.5802	5.6941
$\frac{27}{32}$	11.56	9.078	3.3994	2.6699	5.7923
$\frac{7}{8}$	11.95	9.388	3.5156	2.7612	5.8905
$\frac{29}{32}$	12.36	9.704	3.6337	2.8540	5.9887
$\frac{15}{16}$	12.76	10.02	3.7539	2.9483	6.0868
$\frac{31}{32}$	13.18	10.35	3.8760	3.0442	6.1850
2	13.60	10.68	4.0000	3.1416	6.2832



## SQUARE AND ROUND BARS—Continued

Side or Diameter, Inches	Weight of $\square$ Bar per Foot	Weight of $\bigcirc$ Bar per Foot	Area of $\square$ Bar Square Inches	Area of $\bigcirc$ Bar Square Inches	Circumference of $\bigcirc$ Bar Inches
2 $\frac{1}{16}$	14.46	11.36	4.2539	3.3410	6.4795
$\frac{1}{8}$	15.35	12.06	4.5156	3.5466	6.6759
$\frac{3}{16}$	16.27	12.78	4.7852	3.7583	6.8722
$\frac{1}{4}$	17.22	13.52	5.0625	3.9761	7.0686
$\frac{5}{16}$	18.19	14.28	5.3477	4.2000	7.2649
$\frac{3}{8}$	19.18	15.07	5.6406	4.4301	7.4613
$\frac{7}{16}$	20.20	15.86	5.9414	4.6664	7.6576
$\frac{1}{2}$	21.25	16.69	6.2500	4.9087	7.8540
$\frac{9}{16}$	22.33	17.53	6.5664	5.1572	8.0503
$\frac{5}{8}$	23.43	18.40	6.8906	5.4119	8.2467
$\frac{11}{16}$	24.56	19.29	7.2227	5.6727	8.4430
$\frac{3}{4}$	25.71	20.20	7.5625	5.9396	8.6394
$\frac{13}{16}$	26.90	21.12	7.9102	6.2126	8.8357
$\frac{7}{8}$	28.10	22.07	8.2656	6.4918	9.0321
$\frac{15}{16}$	29.34	23.04	8.6289	6.7771	9.2284
3	30.60	24.03	9.0000	7.0686	9.4248
$\frac{1}{16}$	31.89	25.04	9.3789	7.3662	9.6211
$\frac{1}{8}$	33.20	26.08	9.7656	7.6699	9.8175
$\frac{3}{16}$	34.55	27.13	10.160	7.9798	10.014
$\frac{1}{4}$	35.92	28.20	10.563	8.2958	10.210
$\frac{5}{16}$	37.31	29.30	10.973	8.6179	10.407
$\frac{3}{8}$	38.73	30.42	11.391	8.9462	10.603
$\frac{7}{16}$	40.18	31.56	11.816	9.2806	10.799
$\frac{1}{2}$	41.65	32.71	12.250	9.6211	10.996
$\frac{9}{16}$	43.14	33.90	12.691	9.9678	11.192
$\frac{5}{8}$	44.68	35.09	13.141	10.321	11.388
$\frac{11}{16}$	46.24	36.31	13.598	10.680	11.585
$\frac{3}{4}$	47.82	37.56	14.063	11.045	11.781
$\frac{13}{16}$	49.42	38.81	14.535	11.416	11.977
$\frac{7}{8}$	51.05	40.10	15.016	11.793	12.174
$\frac{15}{16}$	52.71	41.40	15.504	12.177	12.370
4	54.40	42.73	16.000	12.566	12.566



## SQUARE AND ROUND BARS—Continued

Side or Diameter, Inches	Weight of $\square$ Bar per Foot	Weight of $\bigcirc$ Bar per Foot	Area of $\square$ Bar Square Inches	Area of $\bigcirc$ Bar Square Inches	Circumference of $\bigcirc$ Bar Inches
$4\frac{1}{16}$	56.11	44.07	16.504	12.962	12.763
$4\frac{1}{8}$	57.85	45.44	17.016	13.364	12.959
$4\frac{3}{16}$	59.62	46.83	17.535	13.772	13.155
$4\frac{1}{2}$	61.41	48.24	18.063	14.186	13.352
$4\frac{7}{8}$	63.23	49.66	18.598	14.607	13.548
$5\frac{1}{8}$	65.08	51.11	19.141	15.033	13.744
$5\frac{3}{16}$	66.95	52.58	19.691	15.466	13.941
$5\frac{1}{2}$	68.85	54.07	20.250	15.904	14.137
$5\frac{7}{8}$	70.78	55.59	20.816	16.349	14.334
$6\frac{1}{8}$	72.73	57.12	21.391	16.800	14.530
$6\frac{3}{16}$	74.70	58.67	21.973	17.257	14.726
$6\frac{1}{2}$	76.71	60.25	22.563	17.721	14.923
$6\frac{7}{8}$	78.74	61.84	23.160	18.190	15.119
$7\frac{1}{8}$	80.81	63.46	23.766	18.665	15.315
$7\frac{3}{16}$	82.89	65.10	24.379	19.147	15.512
5	85.00	66.76	25.000	19.635	15.708
$7\frac{1}{2}$	87.14	68.44	25.629	20.129	15.904
$7\frac{7}{8}$	89.30	70.14	26.266	20.629	16.101
$8\frac{1}{8}$	91.49	71.86	26.910	21.135	16.297
$8\frac{3}{16}$	93.72	73.60	27.563	21.648	16.493
$8\frac{1}{2}$	95.96	75.37	28.223	22.166	16.690
$8\frac{7}{8}$	98.23	77.15	28.891	22.691	16.886
$9\frac{1}{8}$	100.5	78.93	29.566	23.221	17.082
$9\frac{3}{16}$	102.8	80.77	30.250	23.758	17.279
$9\frac{1}{2}$	105.2	82.62	30.941	24.301	17.475
$9\frac{7}{8}$	107.6	84.49	31.641	24.850	17.671
$10\frac{1}{8}$	110.0	86.38	32.348	25.406	17.868
$10\frac{3}{16}$	112.4	88.29	33.063	25.967	18.064
$10\frac{1}{2}$	114.9	90.22	33.785	26.535	18.261
$10\frac{7}{8}$	117.4	92.17	34.516	27.109	18.457
$11\frac{1}{8}$	119.9	94.14	35.254	27.688	18.653
6	122.4	96.14	36.000	28.274	18.850

## SQUARE AND ROUND BARS—Continued

Side or Diameter, Inches	Weight of □ Bar per Foot	Weight of ○ Bar per Foot	Area of □ Bar Square Inches	Area of ○ Bar Square Inches	Circumference of ○ Bar Inches
6 $\frac{1}{16}$	125.0	98.14	36.754	28.866	19.046
$\frac{1}{8}$	127.6	100.2	37.516	29.465	19.242
$\frac{3}{16}$	130.2	102.2	38.285	30.069	19.439
$\frac{1}{4}$	132.8	104.3	39.063	30.680	19.635
$\frac{5}{16}$	135.5	106.4	39.848	31.296	19.831
$\frac{3}{8}$	138.2	108.5	40.641	31.919	20.028
$\frac{7}{16}$	140.9	110.7	41.441	32.548	20.224
$\frac{1}{2}$	143.6	112.8	42.250	33.183	20.420
$\frac{9}{16}$	146.5	114.9	43.066	33.824	20.617
$\frac{5}{8}$	149.2	117.2	43.891	34.472	20.813
$\frac{11}{16}$	152.1	119.4	44.723	35.125	21.009
$\frac{3}{4}$	154.9	121.7	45.563	35.785	21.206
$\frac{13}{16}$	157.8	123.9	46.410	36.450	21.402
$\frac{7}{8}$	160.8	126.2	47.266	37.122	21.598
$\frac{15}{16}$	163.6	128.5	48.129	37.800	21.795
7 $\frac{1}{16}$	166.6	130.9	49.000	38.485	21.991
$\frac{1}{8}$	169.6	133.2	49.879	39.175	22.187
$\frac{1}{8}$	172.6	135.6	50.766	39.871	22.384
$\frac{3}{16}$	175.6	137.9	51.660	40.574	22.580
$\frac{1}{4}$	178.7	140.4	52.563	41.282	22.777
$\frac{5}{16}$	181.8	142.8	53.473	41.997	22.973
$\frac{3}{8}$	184.9	145.3	54.391	42.718	23.169
$\frac{7}{16}$	188.1	147.7	55.316	43.445	23.366
$\frac{1}{2}$	191.3	150.2	56.250	44.179	23.562
$\frac{9}{16}$	194.4	152.7	57.191	44.918	23.758
$\frac{5}{8}$	197.7	155.2	58.141	45.664	23.955
$\frac{11}{16}$	200.9	157.8	59.098	46.415	24.151
$\frac{3}{4}$	204.2	160.3	60.063	47.173	24.347
$\frac{13}{16}$	207.6	163.0	61.035	47.937	24.544
$\frac{7}{8}$	210.8	165.6	62.016	48.707	24.740
$\frac{15}{16}$	214.2	168.2	63.004	49.483	24.936
8 $\frac{1}{16}$	217.6	171.0	64.000	50.265	25.133

# **AREAS, CIRCUMFERENCES AND WEIGHTS PER FOOT OF ROUND BARS WITH DIAMETERS IN DECIMALS**

DIAMETER, INCHES		Area, Square Inches	Circumference Inches	Weight per Foot, Pounds
Decimal	Nominal Fraction			
.178	$\frac{3}{16}$ —	.0249	.5592	.085
.220	$\frac{7}{32}$ +	.0380	.6912	.129
.223	$\frac{7}{32}$ +	.0391	.7006	.133
.227	$\frac{15}{64}$ —	.0405	.7131	.138
.230	$\frac{15}{64}$ —	.0415	.7226	.141
.231	$\frac{15}{64}$ —	.0418	.7257	.142
.236	$\frac{15}{64}$ +	.0437	.7414	.149
.238	$\frac{15}{64}$ +	.0445	.7477	.152
.240	$\frac{1}{4}$ —	.0452	.7540	.154
.242	$\frac{1}{4}$ —	.0460	.7603	.157
.243	$\frac{1}{4}$ —	.0464	.7634	.158
.244	$\frac{1}{4}$ —	.0467	.7665	.159
.245	$\frac{1}{4}$ —	.0471	.7697	.160
.247	$\frac{1}{4}$ —	.0479	.7760	.163
.248	$\frac{1}{4}$ —	.0483	.7791	.164
.250	$\frac{1}{4}$ —	.0491	.7854	.167
.255	$\frac{1}{4}$ +	.0511	.8011	.174
.258	$\frac{1}{4}$ +	.0523	.8105	.178
.262	$\frac{17}{64}$ —	.0539	.8231	.183
.263	$\frac{17}{64}$ —	.0543	.8262	.185
.275	$\frac{9}{32}$ —	.0594	.8639	.202
.280	$\frac{9}{32}$ —	.0616	.8796	.209
.281	$\frac{9}{32}$ —	.0620	.8828	.211
.286	$\frac{9}{32}$ +	.0642	.8985	.218
.289	$\frac{19}{64}$ —	.0656	.9079	.223
.290	$\frac{19}{64}$ —	.0660	.9111	.224
.292	$\frac{19}{64}$ —	.0669	.9173	.227
.295	$\frac{19}{64}$ —	.0683	.9268	.232
.297	$\frac{19}{64}$ —	.0693	.9330	.236
.298	$\frac{19}{64}$ +	.0697	.9362	.238
.300	$\frac{19}{64}$ +	.0707	.9425	.240
.302	$\frac{19}{64}$ +	.0716	.9488	.243
.304	$\frac{19}{64}$ +	.0725	.9550	.246

## ROUND BARS

## DIAMETERS IN DECIMALS (Continued)

DIAMETER, INCHES		Area, Square Inches	Circumference Inches	Weight per Foot, Pounds
Decimal	Nominal Fraction			
.305	$\frac{5}{16}$ —	.0731	.9582	.248
.306	$\frac{5}{16}$ —	.0735	.9 13	.250
.307	$\frac{5}{16}$ —	.0740	.9645	.252
.308	$\frac{5}{16}$ —	.0745	.9676	.253
.310	$\frac{5}{16}$ —	.0754	.9739	.256
.312	$\frac{5}{16}$ —	.0764	.9802	.260
.314	$\frac{5}{16}$ +	.0774	.9865	.263
.315	$\frac{5}{16}$ +	.0779	.9896	.265
.323	$\frac{21}{64}$ —	.0819	1.0147	.278
.324	$\frac{21}{64}$ —	.0824	1.0179	.280
.330	$\frac{21}{64}$ +	.0855	1.0367	.291
.335	$\frac{11}{32}$ —	.0881	1.0524	.299
.343	$\frac{11}{32}$ —	.0924	1.0776	.314
.344	$\frac{11}{32}$ —	.0929	1.0807	.316
.345	$\frac{11}{32}$ +	.0935	1.0838	.318
.355	$\frac{23}{64}$ —	.0990	1.1153	.337
.356	$\frac{23}{64}$ —	.0995	1.1184	.338
.360	$\frac{23}{64}$ —	.1018	1.1310	.346
.361	$\frac{23}{64}$ +	.1023	1.1341	.348
.362	$\frac{23}{64}$ +	.1029	1.1372	.350
.364	$\frac{23}{64}$ +	.1041	1.1435	.354
.365	$\frac{23}{64}$ +	.1046	1.1467	.356
.367	$\frac{23}{64}$ +	.1058	1.1530	.360
.368	$\frac{3}{8}$ —	.1064	1.1561	.362
.370	$\frac{3}{8}$ —	.1075	1.1624	.365
.372	$\frac{3}{8}$ —	.1087	1.1687	.369
.373	$\frac{3}{8}$ —	.1093	1.1718	.372
.374	$\frac{3}{8}$ —	.1098	1.1749	.373
.375	$\frac{3}{8}$ —	.1104	1.1781	.376
.390	$\frac{25}{64}$	.1194	1.2252	.406
.420	$\frac{27}{64}$ —	.1385	1.3195	.471
.424	$\frac{27}{64}$ +	.1412	1.3320	.480
.427	$\frac{27}{64}$ +	.1432	1.3415	.487



# **ROUND BARS** **DIAMETERS IN DECIMALS—(Continued)**

DIAMETER, INCHES		Area, Square Inches	Circumference Inches	Weight per Foot, Pounds
Decimal	Nominal Fraction			
.430	$\frac{7}{16}$ —	.1452	1.3509	.494
.431	$\frac{7}{16}$ —	.1459	1.3540	.496
.432	$\frac{7}{16}$ —	.1466	1.3572	.498
.436	$\frac{7}{16}$ —	.1493	1.3697	.508
.437	$\frac{7}{16}$ —	.1500	1.3739	.510
.442	$\frac{7}{16}$ +	.1534	1.3886	.522
.446	$\frac{29}{64}$ —	.1562	1.4012	.531
.470	$\frac{15}{32}$ +	.1735	1.4765	.590
.486	$\frac{31}{64}$ +	.1855	1.5268	.631
.487	$\frac{31}{64}$ +	.1863	1.5300	.633
.490	$\frac{31}{64}$ +	.1886	1.5394	.641
.493	$\frac{1}{2}$ —	.1909	1.5488	.649
.495	$\frac{1}{2}$ —	.1924	1.5551	.654
.497	$\frac{1}{2}$ —	.1940	1.5614	.660
.500	$\frac{1}{2}$	.1963	1.5708	.668
.550	$\frac{35}{64}$ +	.2376	1.7279	.808
.552	$\frac{35}{64}$ +	.2393	1.7342	.814
.556	$\frac{9}{16}$ —	.2428	1.7467	.825
.603	$\frac{39}{64}$ —	.2856	1.8944	.971
.610	$\frac{39}{64}$ —	.2922	1.9164	.994
.615	$\frac{39}{64}$ +	.2971	1.9321	1.010
.618	$\frac{5}{8}$ —	.3000	1.9415	1.020
.625	$\frac{5}{8}$	.3068	1.9635	1.043
.665	$\frac{43}{64}$ —	.3473	2.0892	1.181
.727	$\frac{47}{64}$ —	.4151	2.2839	1.411
.732	$\frac{47}{64}$ —	.4208	2.2997	1.431
.734	$\frac{47}{64}$ —	.4231	2.3059	1.439
.735	$\frac{47}{64}$ —	.4243	2.3091	1.443
.740	$\frac{47}{64}$ +	.4301	2.3248	1.462
.747	$\frac{3}{4}$ —	.4383	2.3468	1.490
.750	$\frac{3}{4}$	.4418	2.3562	1.502
.800	$\frac{51}{64}$ +	.5027	2.5133	1.709
.811	$\frac{13}{16}$ —	.5166	2.5478	1.756
.851	$\frac{27}{32}$ +	.5688	2.6735	1.934
.865	$\frac{55}{64}$ +	.5877	2.7175	1.998
.875	$\frac{7}{8}$	.6013	2.7489	2.044
.920	$\frac{59}{64}$ —	.6648	2.8903	2.260
.990	1—	.7698	3.1102	2.617



## COILED ROUNDS

Diameter of Bar, Inches	Weight of Coil, Pounds	Length of Bar, Feet	Diameter of Bar, Inches	Weight of Coil, Pounds	Length of Bar, Feet
$\frac{3}{16}$	6	60	$\frac{31}{64}$	150	235
$\frac{7}{32}$	10	70	$\frac{1}{2}$	150	224
$\frac{15}{64}$	12	75	$\frac{17}{32}$	150	195
$\frac{1}{4}$	15	80	$\frac{35}{64}$	150	185
$\frac{9}{32}$	19	80	$\frac{9}{16}$	150	175
$\frac{19}{64}$	100	415	$\frac{39}{64}$	150	150
$\frac{5}{16}$	150	570	$\frac{5}{8}$	200	143
$\frac{21}{64}$	150	515	$\frac{41}{64}$	200	135
$\frac{11}{32}$	150	470	$\frac{21}{32}$	200	130
$\frac{23}{64}$	150	440	$\frac{43}{64}$	200	124
$\frac{3}{8}$	150	400	$\frac{11}{16}$	200	119
$\frac{25}{64}$	150	366	$\frac{45}{64}$	200	114
$\frac{13}{32}$	150	338	$\frac{23}{32}$	200	109
$\frac{27}{64}$	150	314	$\frac{47}{64}$	200	104
$\frac{15}{32}$	150	250	$\frac{3}{4}$	200	100

NOTE.—By special arrangement rounds  $\frac{1}{8}$ " to  $\frac{3}{4}$ " may be procured in coils weighing 150 lbs. or 300 lbs.

## COILED FLATS

Size of Bar, Inches	Weight of Coil, Pounds	Length of Bar, Feet	Size of Bar, Inches	Weight of Coil, Pounds	Length of Bar, Feet
$\frac{9}{16} \times \frac{9}{32}$	26	50	$\frac{11}{16} \times \frac{11}{32}$	40	50
$\frac{13}{32} \times \frac{21}{64}$	32	50	$\frac{11}{16} \times \frac{25}{64}$	44	50
$\frac{5}{8} \times \frac{5}{16}$	32	50	$\frac{33}{32} \times \frac{5}{16}$	38	50
$\frac{31}{32} \times \frac{5}{16}$	33	50	$\frac{35}{32} \times \frac{25}{64}$	50	50
$\frac{31}{32} \times \frac{21}{64}$	36	50	$1 \times \frac{33}{64}$	84	50

**HALF ROUNDS****DIAMETER**

Inches


 $\frac{5}{16}, \frac{3}{8}, \frac{7}{16}, \frac{1}{2}, \frac{9}{16}, \frac{5}{8}, \frac{11}{16}, \frac{3}{4}, \frac{7}{8}$ 
 $1, 1\frac{1}{8}, 1\frac{1}{4}, 1\frac{1}{2}, 1\frac{3}{4}, 2$ 
**HEXAGONS****WIDTH ACROSS FLATS**

Inches


 $\frac{5}{16}, \frac{3}{8}, \frac{7}{16}, \frac{1}{2}, \frac{9}{16}, \frac{5}{8}, \frac{11}{16}, \frac{3}{4}, \frac{13}{16}, \frac{7}{8}$ 
 $\frac{15}{16}, 1, 1\frac{1}{16}, 1\frac{1}{8}, 1\frac{3}{16}, 1\frac{1}{4}, 1\frac{5}{16}$ 
 $1\frac{3}{8}, 1\frac{7}{16}, 1\frac{1}{2}, 1\frac{9}{16}, 1\frac{5}{8}$ 
 $1\frac{11}{16}, 1\frac{3}{4}, 1\frac{13}{16}, 1\frac{7}{8}$ 
 $1\frac{15}{16}, 2, 2\frac{1}{16}$ 
 $2\frac{1}{4}, 2\frac{5}{16}$

## HALF ROUNDS

Diameter, Inches	Weight per Foot, Pounds	Diameter, Inches	Weight per Foot, Pounds
$\frac{5}{16}$	.131	$1\frac{3}{16}$	1.883
$\frac{3}{8}$	.188	$1\frac{1}{4}$	2.086
$\frac{7}{16}$	.256	$1\frac{5}{16}$	2.300
$\frac{1}{2}$	.334	$1\frac{3}{8}$	2.525
$\frac{9}{16}$	.423	$1\frac{7}{16}$	2.759
$\frac{5}{8}$	.522	$1\frac{1}{2}$	3.004
$\frac{11}{16}$	.631	$1\frac{9}{16}$	3.260
$\frac{3}{4}$	.751	$1\frac{5}{8}$	3.526
$\frac{13}{16}$	.882	$1\frac{11}{16}$	3.802
$\frac{7}{8}$	1.022	$1\frac{3}{4}$	4.089
$\frac{15}{16}$	1.174	$1\frac{13}{16}$	4.387
1	1.335	$1\frac{7}{8}$	4.694
$1\frac{1}{16}$	1.507	$1\frac{15}{16}$	5.010
$1\frac{1}{8}$	1.690	2	5.340

## HEXAGONS

Width Across Flats, Inches	Weight per Foot, Pounds	Width Across Flats, Inches	Weight per Foot, Pounds
$\frac{5}{16}$	.288	$1\frac{5}{16}$	5.072
$\frac{3}{8}$	.414	$1\frac{3}{8}$	5.567
$\frac{7}{16}$	.564	$1\frac{7}{16}$	6.085
$\frac{1}{2}$	.736	$1\frac{1}{2}$	6.625
$\frac{9}{16}$	.933	$1\frac{9}{16}$	7.189
$\frac{5}{8}$	1.150	$1\frac{5}{8}$	7.775
$\frac{11}{16}$	1.392	$1\frac{11}{16}$	8.385
$\frac{3}{4}$	1.656	$1\frac{3}{4}$	9.018
$\frac{13}{16}$	1.944	$1\frac{13}{16}$	9.673
$\frac{7}{8}$	2.254	$1\frac{7}{8}$	10.352
$\frac{15}{16}$	2.588	$1\frac{15}{16}$	11.053
1	2.945	2	11.778
$1\frac{1}{16}$	3.324	$2\frac{1}{16}$	12.525
$1\frac{1}{8}$	3.727	$2\frac{1}{4}$	14.906
$1\frac{3}{16}$	4.152	$2\frac{5}{16}$	15.747
$1\frac{1}{4}$	4.601		

**SHARP OVALS**

Inches



$$\frac{1}{2} \times \frac{1}{4}, \frac{9}{16} \times \frac{9}{32}, \frac{5}{8} \times \frac{5}{16}, \frac{3}{4} \times \frac{5}{16}, \frac{3}{4} \times \frac{3}{8}$$

$$\frac{7}{8} \times \frac{5}{16}, \frac{7}{8} \times \frac{3}{8}, \frac{7}{8} \times \frac{7}{16}, 1 \times \frac{7}{16}, 1 \times \frac{1}{2}$$

$$1\frac{1}{8} \times \frac{9}{16}, 1\frac{1}{4} \times \frac{5}{8}, 1\frac{1}{2} \times \frac{3}{4}$$

**BLUNT OVALS**

Inches



$$\frac{5}{8} \times \frac{11}{32}, \frac{7}{8} \times \frac{5}{16}, \frac{7}{8} \times \frac{7}{16}$$

**SHARP OVALS**

Width, Inches	Thickness, Inches	Radius, Inches	Weight per Foot, Pounds
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{5}{16}$	.297
$\frac{9}{16}$	$\frac{9}{32}$	$\frac{11}{32}$	.376
$\frac{5}{8}$	$\frac{5}{16}$	$\frac{25}{64}$	.465
$\frac{3}{4}$	$\frac{5}{16}$	$\frac{17}{32}$	.551
$\frac{3}{4}$	$\frac{3}{8}$	$\frac{15}{32}$	.669
$\frac{7}{8}$	$\frac{5}{16}$	$\frac{11}{16}$	.637
$\frac{7}{8}$	$\frac{3}{8}$	$\frac{39}{64}$	.770
$\frac{7}{8}$	$\frac{7}{16}$	$\frac{35}{64}$	.910
1	$\frac{7}{16}$	$\frac{11}{16}$	1.029
1	$\frac{1}{2}$	$\frac{5}{8}$	1.188
$1\frac{1}{8}$	$\frac{9}{16}$	$\frac{45}{64}$	1.504
$1\frac{1}{4}$	$\frac{5}{8}$	$\frac{25}{32}$	1.856
$1\frac{1}{2}$	$\frac{3}{4}$	$\frac{15}{16}$	2.673

**BLUNT OVALS**

Width, Inches	Thickness, Inches	Long Radius, Inches	Short Radius, Inches	Weight per Foot, Pounds
$\frac{5}{8}$	$\frac{11}{32}$	$\frac{7}{16}$	$\frac{1}{16}$	.557
$\frac{7}{8}$	$\frac{5}{16}$	$\frac{13}{16}$	$\frac{3}{64}$	.735
$\frac{7}{8}$	$\frac{7}{16}$	$\frac{11}{16}$	$\frac{1}{8}$	1.020



## BLUNT HALF OVALS

Inches

$$\frac{3}{8} \times \frac{3}{32}, \frac{7}{16} \times \frac{7}{64}$$

$$\frac{1}{2} \times \frac{1}{8}, \frac{9}{16} \times \frac{9}{64}, \frac{5}{8} \times \frac{3}{16}$$

$$\frac{5}{8} \times \frac{5}{32}, \frac{3}{4} \times \frac{3}{16}, \frac{7}{8} \times \frac{7}{32}, 1 \times \frac{1}{4}$$

$$1\frac{1}{8} \times \frac{9}{32}, 1\frac{1}{4} \times \frac{5}{16}, 1\frac{1}{2} \times \frac{3}{8}, 1\frac{1}{2} \times \frac{5}{16}$$

$$1\frac{1}{2} \times \frac{1}{4}, 1\frac{3}{4} \times \frac{7}{16}, 2 \times \frac{1}{2}$$

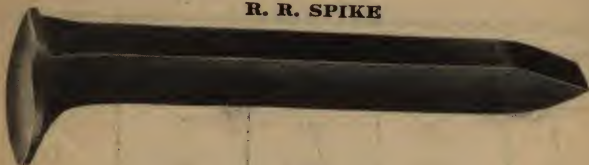
$$2 \times \frac{7}{16}, 2 \times \frac{3}{8}$$

$$2 \times \frac{5}{16}$$

## BLUNT HALF OVALS

Width, Inches	Thickness, Inches	Radius, Inches	Approximate Thickness at Edge, Inches	Weight per Foot, Pounds
$\frac{3}{8}$	$\frac{3}{32}$	$\frac{23}{64}$	$\frac{1}{32}$	.098
$\frac{7}{16}$	$\frac{7}{64}$	$\frac{25}{64}$	$\frac{1}{32}$	.131
$\frac{1}{2}$	$\frac{1}{8}$	$\frac{27}{64}$	$\frac{1}{32}$	.168
$\frac{9}{16}$	$\frac{9}{64}$	$\frac{29}{64}$	$\frac{1}{32}$	.210
$\frac{5}{8}$	$\frac{3}{16}$	$\frac{27}{64}$	$\frac{1}{32}$	.308
$\frac{5}{8}$	$\frac{5}{32}$	$\frac{1}{2}$	$\frac{1}{32}$	.258
$\frac{3}{4}$	$\frac{3}{16}$	$\frac{9}{16}$	$\frac{1}{32}$	.364
$\frac{7}{8}$	$\frac{7}{32}$	$\frac{5}{8}$	$\frac{1}{32}$	.485
1	$\frac{1}{4}$	$\frac{45}{64}$	$\frac{1}{32}$	.630
$1\frac{1}{8}$	$\frac{9}{32}$	$\frac{25}{32}$	$\frac{1}{32}$	.793
$1\frac{1}{4}$	$\frac{5}{16}$	$\frac{7}{8}$	$\frac{1}{32}$	.981
$1\frac{1}{2}$	$\frac{3}{8}$	$1\frac{1}{16}$	$\frac{1}{32}$	1.42
$1\frac{1}{2}$	$\frac{5}{16}$	$1\frac{3}{16}$	$\frac{1}{32}$	1.16
$1\frac{3}{4}$	$\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{64}$	.943
$1\frac{3}{4}$	$\frac{7}{16}$	$1\frac{3}{16}$	$\frac{3}{64}$	1.90
2	$\frac{1}{2}$	$1\frac{3}{8}$	$\frac{3}{64}$	2.49
2	$\frac{7}{16}$	$1\frac{1}{2}$	$\frac{3}{64}$	2.16
2	$\frac{3}{8}$	$1\frac{11}{16}$	$\frac{3}{64}$	1.84
2	$\frac{5}{16}$	$2\frac{1}{16}$	$\frac{3}{64}$	1.56

NOTE.—For blunt half ovals over 2 inches in width see Special Half Ovals on pages 85-86.

**STANDARD SQUARE SPIKES****R. R. SPIKE****BOAT SPIKE****NAIL HEAD SPIKE****BARGE SPIKE****BUTTON HEAD SPIKE**

NOTE.—We invite inquiries concerning spikes to special specifications.

## STANDARD AND REVERSE POINT RAILROAD SPIKES

Size	Average Number per Keg 200 Pounds	QUANTITY OF SPIKES PER MILE OF SINGLE TRACK TIES 2 FT. CEN. TO CEN. 4 SPIKES PER TIE		Rail Used, Weight per Yard
		Pounds	Kegs	
6 $\frac{9}{16}$ X $\frac{5}{8}$	253	8350	41 $\frac{3}{4}$	100 to 110
6 $\frac{1}{2}$ X $\frac{5}{8}$	253	8350	41 $\frac{3}{4}$	100 to 110
6 $\frac{1}{2}$ X $\frac{9}{16}$	280	7550	37 $\frac{3}{4}$	100 to 110
6 X $\frac{5}{8}$	211	10000	50	90 to 110
6 X $\frac{9}{16}$	297	7150	35 $\frac{3}{4}$	90 to 110
5 $\frac{1}{2}$ X $\frac{5}{8}$	265	8000	40	75 to 90
5 $\frac{1}{2}$ X $\frac{9}{16}$	337	6300	31 $\frac{1}{4}$	45 to 75
5 X $\frac{5}{8}$	301	7000	35	40 to 56
5 X $\frac{9}{16}$	374	5650	28 $\frac{1}{4}$	40 to 56
5 X $\frac{1}{2}$	396	5350	26 $\frac{3}{4}$	40 to 56
4 $\frac{1}{2}$ X $\frac{9}{16}$	418	5050	25 $\frac{1}{4}$	40 to 56
4 $\frac{1}{2}$ X $\frac{1}{2}$	538	3950	19 $\frac{3}{4}$	40 to 56
4 $\frac{1}{2}$ X $\frac{7}{16}$	645	3300	16 $\frac{1}{2}$	28 to 30
4 $\frac{1}{2}$ X $\frac{3}{8}$	766	2750	13 $\frac{3}{4}$	28 to 30
4 X $\frac{1}{2}$	565	3750	18 $\frac{3}{4}$	30 to 35
4 X $\frac{7}{16}$	746	2850	14 $\frac{1}{4}$	28 to 30
4 X $\frac{3}{8}$	1002	2100	10 $\frac{1}{2}$	28 to 30
3 $\frac{1}{2}$ X $\frac{1}{2}$	663	3200	16	30 to 35
3 $\frac{1}{2}$ X $\frac{7}{16}$	860	2450	12 $\frac{1}{4}$	20 to 28
3 $\frac{1}{2}$ X $\frac{3}{8}$	1198	1800	9	16 to 20
3 X $\frac{7}{16}$	976	2200	11	16 to 20
3 X $\frac{3}{8}$	1367	1550	7 $\frac{3}{4}$	16 to 20
2 $\frac{1}{2}$ X $\frac{3}{8}$	1445	1500	7 $\frac{1}{2}$	12
2 $\frac{1}{2}$ X $\frac{5}{16}$	1764	1200	6	8

## BOAT, BARGE, BUTTON HEAD AND NAIL HEAD SPIKES

### APPROXIMATE NUMBER PER KEG OF 200 POUNDS

Size, Inches	LENGTH OF SPIKE—INCHES										
	3	4	5	6	7	8	9	10	11	12	14
$\frac{1}{4}$	3000	2375	2050	1825							
$\frac{5}{16}$	1660	1360	1230	1175	990	880					
$\frac{3}{8}$	1320	1140	940	800	650	600	525	475			
$\frac{7}{16}$				600	590	510	400	360	320		
$\frac{1}{2}$				450	375	335	300	275	260	240	
$\frac{3}{4}$						260	240	220	205	190	175

NOTE.—We invite inquiries concerning spikes to special specifications.

## CHAINS

**Straight-  
Link  
Coil  
Chain**



**Conveyor  
or  
Sprocket  
Wheel  
Chain**



**Twist  
Coil  
Chain**





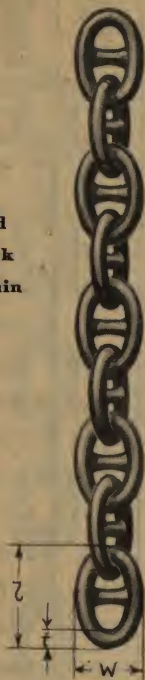
## STRAIGHT-LINK COIL CHAIN

Size of Chain, Inches	Length of Link, Inches	Width of Link, Inches	Weight of Chain per Foot	Proof Test for BB Chain	Proof Test for BBB Chain	Proof Test for Dredge Chain
t	l	W	Pounds	Tons	Tons	Tons
$\frac{3}{16}$	$1\frac{3}{8}$	$1\frac{3}{16}$	.50	.39	.45	.50
$\frac{1}{4}$	$1\frac{1}{2}$	1	.75	.66	.75	.80
$\frac{5}{16}$	$1\frac{3}{4}$	$1\frac{3}{16}$	1.10	1.37	1.60	1.70
$\frac{3}{8}$	2	$1\frac{3}{8}$	1.55	1.92	2.21	2.36
$\frac{7}{16}$	$2\frac{1}{4}$	$1\frac{9}{16}$	2.00	2.64	3.05	3.33
$\frac{1}{2}$	$2\frac{1}{2}$	$1\frac{3}{4}$	2.65	3.41	3.92	4.42
$\frac{9}{16}$	$2\frac{7}{8}$	$1\frac{15}{16}$	3.25	4.29	4.93	5.53
$\frac{5}{8}$	$3\frac{1}{4}$	$2\frac{1}{8}$	4.20	5.28	6.07	6.67
$1\frac{1}{16}$	$3\frac{1}{2}$	$2\frac{5}{16}$	5.00	6.32	7.28	8.02
$\frac{3}{4}$	$3\frac{3}{4}$	$2\frac{1}{2}$	5.90	7.59	8.74	9.24
$1\frac{3}{16}$	4	$2\frac{1}{4}$	7.00	8.91	10.3	10.7
$\frac{7}{8}$	$4\frac{1}{4}$	3	8.00	10.3	11.9	12.1
$1\frac{5}{16}$	$4\frac{1}{2}$	$3\frac{1}{4}$	9.00	11.8	13.6	14.5
1	$4\frac{3}{4}$	$3\frac{1}{2}$	10.0	13.5	15.6	16.3
$1\frac{1}{8}$	$5\frac{1}{2}$	$3\frac{3}{8}$	12.5	16.2	18.6	19.6
$1\frac{1}{4}$	6	$4\frac{1}{4}$	16.0	20.1	23.1	24.0
$1\frac{3}{8}$	$6\frac{1}{2}$	$4\frac{3}{4}$	19.0	24.2	27.8	28.7
$1\frac{1}{2}$	$7\frac{1}{4}$	$5\frac{1}{4}$	21.0	28.9	33.2	34.6
$1\frac{5}{8}$	$7\frac{7}{8}$	$5\frac{3}{4}$	25.0	34.9	39.0	41.0

NOTE.— Safe working loads of chains are one-half of proof test loads. Twist Coil Chains are made in all sizes from  $\frac{1}{16}$  inch to  $\frac{3}{4}$  inch inclusive. Conveyor or Sprocket Wheel Chains are made to any dimensions required, and in ordering give dimensions of links wanted, or preferably a sketch of same.

## CHAINS

Standard  
Stud-Link  
Cable Chain



Standard  
Close-Link  
Cable Chain



**STANDARD STUD-LINK CABLE CHAIN**

Size of Chain, Inches	Length of Link, Inches	Width of Link, Inches	Weight of Chain per Foot	Proof Test
t	l	W	Pounds	Tons
$\frac{3}{4}$	$4\frac{3}{8}$	$2\frac{3}{4}$	5.5	10.1
$1\frac{1}{16}$	$4\frac{3}{4}$	3	6.3	12.0
$\frac{7}{8}$	5	$3\frac{1}{4}$	8.2	13.7
$1\frac{1}{8}$	$5\frac{3}{8}$	$3\frac{1}{2}$	9.2	15.7
1	$5\frac{7}{8}$	$3\frac{3}{4}$	10.2	18.0
$1\frac{1}{16}$	$6\frac{1}{4}$	$3\frac{7}{8}$	11.5	20.3
$1\frac{1}{8}$	$6\frac{1}{2}$	$4\frac{1}{8}$	12.3	22.8
$1\frac{3}{16}$	$6\frac{3}{4}$	$4\frac{1}{4}$	13.5	25.5
$1\frac{1}{4}$	$7\frac{1}{8}$	$4\frac{1}{2}$	15.0	28.1
$1\frac{5}{16}$	$7\frac{3}{8}$	$4\frac{5}{8}$	16.2	31.0
$1\frac{3}{8}$	$7\frac{7}{8}$	$4\frac{7}{8}$	18.3	34.0
$1\frac{7}{16}$	$8\frac{1}{8}$	$5\frac{1}{8}$	18.8	37.2
$1\frac{1}{2}$	$8\frac{1}{2}$	$5\frac{3}{8}$	21.2	40.5
$1\frac{9}{16}$	$8\frac{7}{8}$	$5\frac{5}{8}$	23.8	44.0
$1\frac{5}{8}$	$9\frac{1}{4}$	$5\frac{7}{8}$	25.0	47.5
$1\frac{11}{16}$	$9\frac{5}{8}$	6	26.2	51.2
$1\frac{3}{4}$	10	$6\frac{1}{4}$	28.8	55.2
$1\frac{7}{8}$	$10\frac{1}{2}$	$6\frac{3}{4}$	33.8	63.3
$1\frac{15}{16}$	$10\frac{3}{4}$	7	35.8	67.5
2	$11\frac{1}{8}$	$7\frac{1}{4}$	38.8	72.0
$2\frac{1}{16}$	$11\frac{1}{2}$	$7\frac{1}{2}$	42.3	76.5
$2\frac{1}{8}$	12	$7\frac{3}{4}$	46.0	81.2
$2\frac{3}{16}$	$12\frac{1}{2}$	8	48.3	86.1
$2\frac{1}{4}$	13	$8\frac{1}{4}$	50.0	91.0

**STANDARD CLOSE-LINK CABLE CHAIN**

Size of Chain, Inches	Length of Link, Inches	Width of Link, Inches	Weight of Chain per Foot	Proof Test
t	l	W	Pounds	Tons
1	$4\frac{5}{8}$	$3\frac{1}{2}$	10.3	12.0
$1\frac{1}{16}$	5	$3\frac{5}{8}$	11.8	12.5
$1\frac{1}{8}$	$5\frac{3}{8}$	$3\frac{7}{8}$	12.7	15.1
$1\frac{3}{16}$	$5\frac{1}{2}$	$4\frac{1}{8}$	13.7	16.9
$1\frac{1}{4}$	$5\frac{3}{4}$	$4\frac{1}{4}$	15.2	18.7
$1\frac{5}{16}$	6	$4\frac{1}{2}$	16.5	20.6
$1\frac{3}{8}$	$6\frac{1}{4}$	$4\frac{3}{4}$	18.8	22.6
$1\frac{7}{16}$	$6\frac{5}{8}$	5	19.7	24.7
$1\frac{1}{2}$	$6\frac{7}{8}$	$5\frac{1}{4}$	21.7	27.0
$1\frac{9}{16}$	$7\frac{1}{4}$	$5\frac{1}{2}$	23.0	29.2
$1\frac{5}{8}$	$7\frac{1}{2}$	$5\frac{3}{4}$	25.3	31.6

NOTE.— Safe working loads of chains are one-half of proof test loads.

# **PATENT COLD ROLLED AND COLD DRAWN STEEL ROUNDS**

**FOR SHAFTING, PISTON RODS, ETC.**

Made accurately to size and carefully straightened.

DIAMETER		Weight per Foot	DIAMETER		Weight per Foot
Inches	Mm.		Inches	Mm.	
7	177.80	130.84	3 $\frac{5}{16}$	84.14	29.30
6 $\frac{3}{4}$	171.45	121.67	3 $\frac{1}{4}$	82.55	28.21
6 $\frac{1}{2}$	165.00	112.82	3 $\frac{3}{16}$	80.96	27.14
6 $\frac{1}{4}$	158.75	104.31	3 $\frac{1}{8}$	79.37	26.08
6	152.40	96.13	3 $\frac{1}{16}$	77.79	25.04
5 $\frac{3}{4}$	146.05	88.29	3	76.20	24.04
5 $\frac{1}{2}$	139.70	80.80	2 $\frac{15}{16}$	74.61	23.05
5 $\frac{1}{4}$	132.35	73.60	2 $\frac{7}{8}$	73.02	22.08
5	127.00	66.77	2 $\frac{13}{16}$	71.44	21.13
4 $\frac{15}{16}$	125.41	65.12	2 $\frac{3}{4}$	69.85	20.20
4 $\frac{7}{8}$	123.80	63.46	2 $\frac{11}{16}$	68.26	19.29
4 $\frac{3}{4}$	120.65	60.27	2 $\frac{9}{16}$	66.67	18.40
4 $\frac{11}{16}$	119.06	58.69	2 $\frac{7}{8}$	65.09	17.54
4 $\frac{5}{8}$	117.47	57.12	2 $\frac{1}{2}$	63.50	16.69
4 $\frac{1}{2}$	114.30	54.09	2 $\frac{7}{16}$	61.91	15.87
4 $\frac{7}{16}$	112.71	52.60	2 $\frac{3}{8}$	60.32	15.07
4 $\frac{3}{8}$	111.12	51.12	2 $\frac{5}{16}$	58.74	14.28
4 $\frac{1}{4}$	107.95	48.24	2 $\frac{1}{4}$	57.15	13.52
4 $\frac{3}{16}$	106.36	46.84	2 $\frac{3}{16}$	55.56	12.78
4 $\frac{1}{8}$	104.77	45.44	2 $\frac{1}{8}$	53.97	12.06
4	101.60	42.73	2 $\frac{1}{16}$	52.39	11.36
3 $\frac{15}{16}$	100.01	41.41	2	50.80	10.68
3 $\frac{7}{8}$	98.42	40.12	1 $\frac{15}{16}$	49.21	10.03
3 $\frac{13}{16}$	96.84	38.81	1 $\frac{7}{8}$	47.62	9.39
3 $\frac{3}{4}$	95.25	37.56	1 $\frac{27}{32}$	46.83	9.08
3 $\frac{11}{16}$	93.66	36.32	1 $\frac{13}{16}$	46.04	8.77
3 $\frac{5}{8}$	92.07	35.10	1 $\frac{3}{4}$	44.45	8.18
3 $\frac{9}{16}$	90.49	33.90	1 $\frac{11}{16}$	42.86	7.60
3 $\frac{1}{2}$	88.90	32.72	1 $\frac{5}{8}$	41.27	7.05
3 $\frac{7}{16}$	87.31	31.56	1 $\frac{3}{8}$	39.69	6.52
3 $\frac{1}{4}$	85.72	30.42			

NOTE.—We cold-roll to 5½ inches inclusive; above this we turn.



# **PATENT COLD ROLLED AND COLD DRAWN STEEL ROUNDS**

**FOR SHAFTING, PISTON RODS, ETC.**

Made accurately to size and carefully straightened.

DIAMETER		Weight per Foot	DIAMETER		Weight per Foot
Inches	Mm.		Inches	Mm.	
1 $\frac{1}{2}$	38.10	6.01	1 $\frac{3}{16}$	20.64	1.76
1 $\frac{11}{32}$	37.31	5.76	1 $\frac{5}{16}$	20.24	1.70
1 $\frac{7}{16}$	36.51	5.52	1 $\frac{3}{8}$	19.84	1.63
1 $\frac{13}{32}$	35.72	5.28	1 $\frac{1}{2}$	19.05	1.50
1 $\frac{3}{8}$	34.92	5.05	1 $\frac{1}{4}$	18.65	1.44
1 $\frac{5}{16}$	33.34	4.60	1 $\frac{1}{8}$	18.26	1.38
1 $\frac{9}{32}$	32.54	4.38	1 $\frac{1}{16}$	17.46	1.26
1 $\frac{1}{4}$	31.75	4.17	1 $\frac{1}{8}$	17.06	1.20
1 $\frac{7}{32}$	30.96	3.97	1 $\frac{1}{16}$	16.69	1.15
1 $\frac{3}{16}$	30.48	3.85	1 $\frac{1}{32}$	16.27	1.10
1 $\frac{1}{8}$	30.16	3.77	1 $\frac{1}{64}$	15.87	1.04
1 $\frac{5}{32}$	29.37	3.57	1 $\frac{1}{8}$	15.08	.94
1 $\frac{1}{4}$	28.57	3.38	1 $\frac{1}{16}$	14.29	.84
1 $\frac{3}{32}$	27.78	3.19	1 $\frac{1}{32}$	13.49	.75
1 $\frac{5}{64}$	27.38	3.10	1 $\frac{1}{2}$	12.70	.67
1 $\frac{1}{16}$	26.99	3.01	1 $\frac{1}{8}$	11.91	.59
1 $\frac{1}{32}$	26.19	2.84	1 $\frac{1}{16}$	11.11	.51
1	25.40	2.67	1 $\frac{1}{32}$	10.32	.44
1 $\frac{3}{32}$	24.61	2.51	1 $\frac{1}{8}$	9.52	.37
1 $\frac{1}{8}$	23.81	2.35	1 $\frac{1}{16}$	8.74	.31
1 $\frac{5}{64}$	23.42	2.28	1 $\frac{1}{32}$	7.94	.26
1 $\frac{3}{16}$	23.02	2.19	1 $\frac{1}{64}$	6.35	.17
1 $\frac{1}{4}$	22.22	2.04	1 $\frac{1}{8}$	5.56	.13
1 $\frac{5}{32}$	21.44	1.90	1 $\frac{1}{16}$	4.76	.09
1 $\frac{3}{16}$	21.03	1.83			

NOTE.—We cold-roll to 5½ inches diameter inclusive; above this we turn.





**PATENT COLD ROLLED AND COLD  
DRAWN STEEL HEXAGONS  
SPECIAL STEEL FOR SCREWS**

SIZE (LEAST DIAM.)		Weight per Foot, Pounds	SIZE (LEAST DIAM.)		Weight per Foot, Pounds
Inches	Mm.		Inches	Mm.	
1 $\frac{1}{8}$	47.62	10.35	$\frac{3}{8}$	22.22	2.25
1 $\frac{1}{16}$	46.04	9.67	$\frac{1}{2}$	20.64	1.95
1 $\frac{1}{4}$	44.45	9.02	$\frac{3}{4}$	19.05	1.66
1 $\frac{3}{8}$	42.86	8.39	$\frac{7}{8}$	18.26	1.52
1 $\frac{1}{2}$	41.27	7.78	$\frac{15}{16}$	17.46	1.40
1 $\frac{5}{8}$	39.69	7.19	$\frac{1}{8}$	15.87	1.15
1 $\frac{3}{4}$	38.10	6.62	$\frac{9}{16}$	15.08	1.10
1 $\frac{7}{8}$	36.51	6.09	$\frac{5}{8}$	14.29	.93
1 $\frac{1}{2}$	34.92	5.57	$\frac{11}{16}$	13.49	.82
1 $\frac{1}{4}$	33.34	5.07	$\frac{3}{4}$	12.70	.74
1 $\frac{1}{8}$	31.75	4.60	$\frac{13}{16}$	11.91	.64
1 $\frac{1}{16}$	30.16	4.15	$\frac{7}{8}$	11.11	.56
1 $\frac{1}{8}$	28.57	3.73	$\frac{15}{16}$	10.32	.50
1 $\frac{1}{4}$	27.78	3.52	$\frac{1}{2}$	9.52	.41
1 $\frac{3}{8}$	26.99	3.32	$\frac{11}{16}$	8.74	.36
1 $\frac{1}{2}$	25.40	2.94	$\frac{3}{4}$	7.94	.29
$\frac{15}{16}$	23.81	2.58	$\frac{15}{16}$	7.14	.23
$\frac{3}{4}$	23.02	2.40	$\frac{3}{4}$	6.35	.183



**PATENT COLD ROLLED AND COLD  
DRAWN STEEL SQUARES  
FOR KEYS, SPLINES AND SQUARE SHAFTS**

SQUARE		Weight per Foot, Pounds	SQUARE		Weight per Foot, Pounds
Inches	Mm.		Inches	Mm.	
4	101.60	54.42	$\frac{15}{16}$	23.81	2.99
3 $\frac{1}{4}$	95.25	47.84	$\frac{1}{2}$	22.22	2.60
3 $\frac{1}{2}$	88.90	41.67	$\frac{13}{16}$	20.64	2.25
3 $\frac{3}{4}$	82.55	35.93	$\frac{3}{4}$	19.05	1.92
3	76.20	30.61	$\frac{11}{16}$	17.46	1.61
2 $\frac{3}{4}$	69.85	25.72	$\frac{5}{8}$	15.87	1.33
2 $\frac{1}{2}$	63.50	21.26	$\frac{9}{16}$	14.29	1.08
2 $\frac{1}{4}$	57.15	17.22	$\frac{7}{8}$	12.70	.850
2	50.80	13.61	$\frac{15}{16}$	11.11	.651
1 $\frac{3}{4}$	44.45	10.42	$\frac{3}{4}$	9.52	.478
1 $\frac{5}{8}$	41.27	8.98	$\frac{11}{16}$	8.74	.402
1 $\frac{1}{2}$	38.10	7.65	$\frac{3}{4}$	7.94	.332
1 $\frac{3}{8}$	34.92	6.43	$\frac{15}{16}$	7.14	.269
1 $\frac{1}{4}$	31.75	5.32	$\frac{3}{4}$	6.35	.212
1 $\frac{1}{8}$	28.57	4.31	$\frac{11}{16}$	5.56	.163
1 $\frac{1}{16}$	26.99	3.84	$\frac{3}{4}$	4.76	.120
1	25.40	3.40			

NOTE.—Sizes below 2  $\frac{1}{4}$  inches have sharp corners. Sizes 2  $\frac{1}{4}$ -inch and over, the corners are slightly rounded.

# **PATENT COLD ROLLED AND COLD DRAWN STEEL FLATS**

**FOR FINGER BARS, KNIFE BACKS, KEYS, ENGINE  
GUIDES, ELEVATOR SLIDES, ETC.**

Thickness, Inches	Width, Inches
$\frac{3}{16}$ to $\frac{5}{16}$	$\frac{1}{2}$ to 2
$\frac{3}{8}$ and $\frac{7}{16}$	$\frac{1}{2}$ to 2
$\frac{1}{2}$ and $\frac{9}{16}$	$\frac{9}{16}$ to $3\frac{1}{2}$
$\frac{5}{8}$ and $1\frac{1}{16}$	$\frac{9}{16}$ to $3\frac{1}{2}$
$\frac{3}{4}$ to $1\frac{5}{16}$	$\frac{3}{4}$ to $3\frac{1}{2}$
1 to $1\frac{7}{16}$	$1\frac{1}{16}$ to $3\frac{1}{2}$
$1\frac{1}{2}$ to $1\frac{11}{16}$	$1\frac{9}{16}$ to $3\frac{1}{2}$
$1\frac{3}{4}$ to $1\frac{15}{16}$	$1\frac{13}{16}$ to $3\frac{1}{2}$
2 to $2\frac{3}{16}$	$2\frac{1}{16}$ to $3\frac{1}{2}$
$2\frac{1}{4}$ to $2\frac{7}{16}$	$2\frac{5}{16}$ to $3\frac{1}{2}$
$2\frac{1}{2}$ to $2\frac{11}{16}$	$2\frac{9}{16}$ to $3\frac{1}{2}$
$2\frac{3}{4}$ to $2\frac{15}{16}$	$2\frac{13}{16}$ to $3\frac{1}{2}$

## DECIMALS OF AN INCH FOR EACH 1-64TH

$\frac{1}{32}$ nds	$\frac{1}{64}$ ths	Decimal	Fraction	$\frac{1}{32}$ nds	$\frac{1}{64}$ ths	Decimal	Fraction
	1	.015625			33	.515625	
1	2	.03125		17	34	.53125	
	3	.046875			35	.546875	
2	4	.0625	$\frac{1}{16}$	18	36	.5625	$\frac{9}{16}$
	5	.078125			37	.578125	
3	6	.09375		19	38	.59375	
	7	.109375			39	.609375	
4	8	.125	$\frac{1}{8}$	20	40	.625	$\frac{5}{8}$
	9	.140625			41	.640625	
5	10	.15625		21	42	.65625	
	11	.171875			43	.671875	
6	12	.1875	$\frac{3}{16}$	22	44	.6875	$\frac{11}{16}$
	13	.203125			45	.703125	
7	14	.21875		23	46	.71875	
	15	.234375			47	.734375	
8	16	.25	$\frac{1}{4}$	24	48	.75	$\frac{3}{4}$
	17	.265625			49	.765625	
9	18	.28125		25	50	.78125	
	19	.296875			51	.796875	
10	20	.3125	$\frac{5}{16}$	26	52	.8125	$\frac{13}{16}$
	21	.328125			53	.828125	
11	22	.34375		27	54	.84375	
	23	.359375			55	.859375	
12	24	.375	$\frac{3}{8}$	28	56	.875	$\frac{7}{8}$
	25	.390625			57	.890625	
13	26	.40625		29	58	.90625	
	27	.421875			59	.921875	
14	28	.4375	$\frac{7}{16}$	30	60	.9375	$\frac{15}{16}$
	29	.453125			61	.953125	
15	30	.46875		31	62	.96875	
	31	.484375			63	.984375	
16	32	.5	$\frac{1}{2}$	32	64	1.	1

# WIRE AND SHEET METAL GAUGES IN DECIMALS OF AN INCH

Number of Gauge	Birmingham or Stubbs' Iron Wire Gauge	American or Brown & Sharpe Wire Gauge	United States Standard Gauge for Sheet and Plate Iron and Steel	Washburn & Moen Manufacturing Co., John A. Roebling's Sons Co., and American Steel & Wire Co. Wire Gauge	Trenton Iron Co. Wire Gauge	British Imperial or English Legal Standard Wire Gauge
0000000	.....	.....	.5	.....	.....	.500
000000	.....	.....	.46875	.4600	.....	.432
00000	.....	.....	.4375	.4300	.....	.464
0000	.454	.460000	.40625	.3938	.450	.432
000	.425	.409642	.375	.3625	.400	.400
00	.380	.364796	.34375	.3310	.360	.372
0	.340	.324861	.3125	.3065	.330	.348
1	.300	.289297	.28125	.2830	.305	.324
2	.284	.257627	.265625	.2625	.285	.300
3	.259	.229423	.25	.2437	.265	.276
4	.238	.204307	.234375	.2253	.245	.252
5	.220	.181940	.21875	.2070	.225	.232
6	.203	.162023	.203125	.1920	.205	.212
7	.180	.144285	.1875	.1770	.190	.192
8	.165	.128490	.171875	.1620	.175	.176
9	.148	.114423	.15625	.1483	.160	.160
10	.134	.101897	.140625	.1350	.145	.144
11	.120	.090742	.125	.1205	.130	.128
12	.109	.080808	.109375	.1055	.1175	.116
13	.095	.071962	.09375	.0915	.105	.104
14	.083	.064084	.078125	.0800	.0925	.092
15	.072	.057068	.0703125	.0720	.0806	.080
16	.065	.050821	.0625	.0625	.070	.072
17	.058	.045257	.05625	.0540	.061	.064
18	.049	.040303	.05	.0475	.0525	.056
19	.042	.035890	.04375	.0410	.045	.048
20	.035	.031961	.0375	.0348	.040	.040
21	.032	.028462	.034375	.03175	.035	.036
22	.028	.025346	.03125	.0286	.031	.032
23	.025	.022572	.028125	.0258	.028	.028
24	.022	.020101	.025	.0230	.025	.024
25	.020	.017900	.021875	.0204	.0225	.022
26	.018	.015941	.01875	.0181	.020	.020
27	.016	.014195	.0171875	.0173	.018	.018
28	.014	.012641	.015625	.0162	.017	.0164
29	.013	.011257	.0140625	.0150	.016	.0148
30	.012	.010025	.0125	.0140	.015	.0136
31	.010	.008928	.0109375	.0132	.014	.0124
32	.009	.007950	.01015625	.0128	.013	.0116
33	.008	.007080	.009375	.0118	.012	.0108
34	.007	.006305	.00859375	.0104	.011	.0100
35	.005	.005615	.0078125	.0095	.010	.0092
36	.004	.005000	.00703125	.0090	.0095	.0084
37	.....	.004453	.006640625	.0085	.009	.0076
38	.....	.003965	.00625	.0080	.0085	.0068
39	.....	.003531	.....	.0075	.008	.0060
40	.....	.003144	.....	.0070	.0075	.0052
					.007	.0048

The United States Standard Gauge was legalized by Act of Congress March 3, 1893, as a standard gauge for sheet and plate iron and steel.

Since the use of numbers to express thickness or size leads to confusion, we beg our customers to employ decimal parts of an inch, when fractions can not be used conveniently.



# UNITED STATES STANDARD GAUGE FOR SHEET AND PLATE IRON AND STEEL

Schedule of sizes adopted as standard by act of Congress. We ask the cooperation of our friends in the use of fractions, decimals, or weights per square foot in expressing the thickness of plates.

Number of Gauge	Approximate Thickness in Fractions of an Inch	Approximate Thickness in Decimal Parts of an Inch	Approximate Thickness in Millimeters	Weight per Square Foot in Pounds Avordupois, Iron	Weight per Square Foot in Pounds Avordupois, Steel	Weight per Square Meter in Kilogrammes, Steel
0000000	1-2	.5	12.70	20.	20.4	99.601
000000	15-32	.46875	11.91	18.75	19.125	93.376
00000	7-16	.4375	11.11	17.50	17.85	87.151
0000	13-32	.40625	10.32	16.25	16.575	80.926
000	3-8	.375	9.53	15.	15.3	74.701
00	11-32	.34375	8.73	13.75	14.025	68.476
0	5-16	.3125	7.94	12.50	12.75	62.251
1	9-32	.28125	7.14	11.25	11.475	56.026
2	17-64	.265625	6.75	10.625	10.8375	52.913
3	1-4	.25	6.35	10.	10.2	49.800
4	15-64	.234375	5.95	9.375	9.5625	46.688
5	7-32	.21875	5.56	8.75	8.925	43.575
6	13-64	.203125	5.16	8.125	8.2875	40.463
7	3-16	.1875	4.76	7.5	7.65	37.350
8	11-64	.171875	4.37	6.875	7.0125	34.238
9	5-32	.15625	3.97	6.25	6.375	31.125
10	9-64	.140625	3.57	5.625	5.7375	28.013
11	1-8	.125	3.18	5.	5.1	24.900
12	7-64	.109375	2.78	4.375	4.4625	21.788
13	3-32	.09375	2.38	3.75	3.825	18.675
14	5-64	.078125	1.98	3.125	3.1875	15.563
15	9-128	.0703125	1.79	2.8125	2.86875	14.006
16	1-16	.0625	1.59	2.5	2.55	12.450
17	9-160	.05625	1.43	2.25	2.295	11.205
18	1-20	.05	1.27	2.	2.04	9.960
19	7-160	.04375	1.11	1.75	1.785	8.715
20	3-80	.0375	.953	1.50	1.53	7.470
21	11-320	.034375	.873	1.375	1.4025	6.848
22	1-32	.03125	.794	1.25	1.275	6.225
23	9-320	.028125	.714	1.125	1.1475	5.603
24	1-40	.025	.635	1.	1.02	4.980
25	7-320	.021875	.556	.875	.8925	4.358
26	3-160	.01875	.476	.75	.765	3.735
27	11-640	.0171875	.437	.6875	.70125	3.424
28	1-64	.015625	.397	.625	.6375	3.113
29	9-640	.0140625	.357	.5625	.57375	2.801
30	1-80	.0125	.318	.5	.51	2.490
31	7-640	.0109375	.278	.4375	.44625	2.179
32	13-1280	.01015625	.258	.40625	.414375	2.023
33	3-320	.009375	.238	.375	.3825	1.868
34	11-1280	.00859375	.218	.34375	.350625	1.712
35	5-640	.0078125	.198	.3125	.31875	1.556
36	9-1280	.00703125	.179	.28125	.286875	1.401
37	17-2560	.006640625	.169	.265625	.2709375	1.323
38	1-160	.00625	.159	.25	.255	1.245



## J. & L. STANDARD CLASSIFICATION OF EXTRAS ON STEEL BARS AND SMALL SHAPES

Extras are given in cents per pound

### ROUNDS AND SQUARES

ROUNDS TO  $7\frac{5}{16}$  INCHES — SQUARES TO  $4\frac{1}{2}$  INCHES.

	Base
$\frac{3}{4}$ to $3\frac{1}{16}$ inches .....	.10c. extra
$\frac{5}{8}$ to $\frac{11}{16}$ inch .....	.20c. "
$\frac{1}{2}$ to $\frac{9}{16}$ inch .....	.40c. "
$\frac{7}{16}$ inch .....	.50c. "
$\frac{3}{8}$ inch .....	.60c. "
$\frac{11}{32}$ inch .....	.70c. "
$\frac{1}{16}$ inch .....	.80c. "
$\frac{9}{32}$ inch .....	1.00c. "
$\frac{1}{4}$ inch .....	1.50c. "
$\frac{13}{64}$ inch .....	2.00c. "
$\frac{7}{32}$ inch .....	2.50c. "
$\frac{1}{16}$ inch .....	.15c. "
$3\frac{1}{8}$ to $3\frac{9}{16}$ inches .....	.25c. "
$3\frac{3}{8}$ to $4\frac{1}{16}$ inches .....	.30c. "
$4\frac{1}{8}$ to $4\frac{9}{16}$ inches .....	.40c. "
$4\frac{3}{8}$ to 5 inches .....	.50c. "
$5\frac{1}{8}$ to $5\frac{1}{2}$ inches .....	.75c. "
$5\frac{3}{8}$ to 6 inches .....	1.00c. "
$6\frac{1}{8}$ to $6\frac{1}{2}$ inches .....	1.25c. "
$6\frac{3}{8}$ to $7\frac{5}{16}$ inches .....	

For intermediate sizes, the next higher extra to be charged in all cases.

### OVALS

$\frac{3}{4}$ to $1\frac{1}{2}$ inches .....	.30c. extra
$\frac{1}{2}$ inch .....	.50c. "
$\frac{9}{16}$ inch .....	.60c. "
$\frac{1}{2}$ inch .....	.80c. "

For intermediate sizes, the next higher extra to be charged in all cases.

For information as to sizes we make, see page 159 for Ovals, and page 146 for Rounds and Squares.

## J. & L. STANDARD CLASSIFICATION OF EXTRAS ON STEEL BARS AND SMALL SHAPES

(Continued)

### HALF OVALS

$\frac{7}{8}$ to 4 inch x $\frac{7}{32}$ to $\frac{1}{2}$ inch .....	.50c. extra
$2\frac{1}{4}$ x $\frac{5}{8}$ inch (special) .....	.50c. "
$\frac{3}{4}$ x $\frac{3}{16}$ inch .....	.80c. "
$\frac{5}{8}$ x $\frac{5}{32}$ and $\frac{3}{16}$ inch .....	1.00c. "
$\frac{9}{16}$ x $\frac{3}{8}$ inch .....	1.30c. "
$\frac{9}{16}$ inch x No. 13 .....	1.80c. "
$\frac{1}{2}$ x $\frac{1}{8}$ inch .....	1.30c. "
$\frac{7}{16}$ x $\frac{7}{64}$ inch .....	2.10c. "
$\frac{3}{8}$ x $\frac{3}{32}$ to $\frac{5}{32}$ inch .....	2.50c. "

### HALF ROUNDS

$\frac{7}{8}$ to 2 inch .....	.50c. extra
$\frac{3}{4}$ inch .....	.80c. "
$\frac{5}{8}$ and $\frac{11}{16}$ inch .....	1.00c. "
$\frac{1}{2}$ inch .....	1.30c. "
$\frac{7}{16}$ inch .....	2.10c. "
$\frac{3}{8}$ inch .....	2.50c. "
$\frac{5}{16}$ inch .....	2.60c. "

### HEAVY FLAT BARS AND BANDS

1 to 6 inch x $\frac{3}{8}$ to 1 inch .....	Base
1 to 6 inch x $\frac{1}{4}$ to $\frac{5}{16}$ inch .....	.20c. extra
$\frac{11}{16}$ to $\frac{15}{16}$ inch x $\frac{3}{8}$ to $\frac{3}{4}$ inch .....	.40c. "
$\frac{11}{16}$ to $\frac{15}{16}$ inch x $\frac{1}{4}$ to $\frac{5}{16}$ inch .....	.50c. "
$\frac{9}{16}$ to $\frac{5}{8}$ inch x $\frac{3}{8}$ to $\frac{1}{2}$ inch .....	.50c. "
$\frac{9}{16}$ to $\frac{5}{8}$ inch x $\frac{1}{4}$ to $\frac{5}{16}$ inch .....	.70c. "
$\frac{1}{2}$ inch x $\frac{3}{8}$ to $\frac{7}{16}$ inch .....	1.00c. "
$\frac{1}{2}$ inch x $\frac{1}{4}$ to $\frac{5}{16}$ inch .....	1.20c. "
$\frac{3}{8}$ inch x $\frac{1}{4}$ to $\frac{5}{16}$ inch .....	2.00c. "
$1\frac{1}{8}$ to 6 inch x $1\frac{1}{16}$ to $1\frac{3}{16}$ inch .....	.10c. "
$1\frac{1}{8}$ to 6 inch x $1\frac{1}{4}$ to $1\frac{1}{2}$ inch .....	.20c. "
$1\frac{1}{4}$ to 6 inch x $1\frac{1}{8}$ to $2\frac{1}{2}$ inch .....	.30c. "

For intermediate sizes, the next higher extra to be charged in all cases.

Above extras not applicable on Steel Tires.

For information as to sizes we make, see page 161 for Half Ovals, 157 for Half Rounds, and 117 for Flat Bars.

# **J. & L. STANDARD CLASSIFICATION OF EXTRAS ON STEEL BARS AND SMALL SHAPES**

(Continued)

## LIGHT FLAT BARS AND BANDS

$1\frac{1}{2}$ to 6	inch x Nos. 7, 8, 9 and $\frac{3}{16}$ inch	.....	.40c. extra
$1\frac{1}{2}$ to 6	inch x Nos. 10, 11, 12 and $\frac{1}{8}$ inch	.....	.60c. "
1 to $1\frac{7}{16}$	inch x Nos. 7, 8, 9 and $\frac{3}{16}$ inch	.....	.50c. "
1 to $1\frac{7}{16}$	inch x Nos. 10, 11, 12 and $\frac{1}{8}$ inch	.....	.70c. "
$\frac{13}{16}$ to $\frac{15}{16}$	inch x Nos. 7, 8, 9 and $\frac{3}{16}$ inch	.....	.70c. "
$\frac{11}{16}$ to $\frac{13}{16}$	inch x Nos. 10, 11, 12 and $\frac{1}{8}$ inch	.....	.80c. "
$\frac{11}{16}$ to $\frac{3}{4}$	inch x Nos. 7, 8, 9 and $\frac{3}{16}$ inch	.....	1.00c. "
$\frac{11}{16}$ to $\frac{3}{4}$	inch x Nos. 10, 11, 12 and $\frac{1}{8}$ inch	.....	1.20c. "
$\frac{9}{16}$ to $\frac{5}{8}$	inch x Nos. 7, 8, 9 and $\frac{3}{16}$ inch	.....	1.20c. "
$\frac{9}{16}$ to $\frac{5}{8}$	inch x Nos. 10, 11, 12 and $\frac{1}{8}$ inch	.....	1.30c. "
$\frac{1}{2}$ inch	x Nos. 7, 8, 9 and $\frac{3}{16}$ inch	.....	1.30c. "
$\frac{1}{2}$ inch	x Nos. 10, 11, 12 and $\frac{1}{8}$ inch	.....	1.50c. "
$\frac{7}{16}$ inch	x $\frac{7}{32}$ inch	.....	1.80c. "
$\frac{3}{8}$ inch	x Nos. 7, 8, 9 to $\frac{3}{16}$ inch	.....	1.90c. "
$\frac{3}{8}$ inch	x No. 10 and $\frac{1}{8}$ inch	.....	2.40c. "

For intermediate sizes, the next higher extra to be charged in all cases.

## HEXAGONS

$\frac{3}{4}$ to $2\frac{5}{16}$	inches	.....	.30c. extra
$\frac{7}{8}$ to $1\frac{1}{8}$	inch	.....	.50c. "
$\frac{1}{2}$ to $\frac{9}{16}$	inch	.....	.70c. "
$\frac{7}{16}$ inch		.....	1.10c. "
$\frac{3}{8}$ inch		.....	1.30c. "
$\frac{5}{16}$ inch		.....	1.50c. "

For intermediate sizes, the next higher extra to be charged in all cases.

## ANGLES

$1\frac{1}{2}$ x $1\frac{1}{2}$ inches	and wider, but under 3 inches, x $\frac{3}{16}$ inch and heavier	.....	.20c. extra
$1\frac{1}{2}$ x $1\frac{1}{2}$ inches	and wider, but under 3 inches, x $\frac{1}{8}$ inch	.....	.30c. "
1 x 1 to $1\frac{1}{2}$ x $1\frac{1}{2}$ inches	x $\frac{3}{16}$ inch and heavier	.....	.30c. "
1 x 1 to $1\frac{1}{2}$ x $1\frac{1}{2}$ inches	x $\frac{1}{8}$ inch	.....	.40c. "
$\frac{3}{4}$ x $\frac{3}{4}$ inch	x $\frac{3}{16}$ inch	.....	.50c. "
$\frac{3}{4}$ x $\frac{3}{4}$ inch	x $\frac{1}{8}$ inch	.....	.60c. "
3 inches	on one or both legs by less than $\frac{1}{4}$ inch thick	.....	.70c. "

Prices quoted on application for special sizes.

For intermediate sizes, the next higher extra to be charged in all cases.

## J. & L. STANDARD CLASSIFICATION OF EXTRAS ON STEEL BARS AND SMALL SHAPES

(Continued)

### CHANNELS

1½ inches and wider, but under 3 inches, x ⅜ inch and heavier .....	.20c. extra
1½ inches and wider, but under 3 inches, x ½ inch .....	.30c. "
1 to 1½ inches x ⅜ inch and heavier .....	.30c. "
1 to 1½ inches x ½ inch .....	.40c. "
⅞ x ⅜ inch and 1½ inch .....	.50c. "
¾ x ⅜ inch .....	.60c. "
¾ x ⅝ inch .....	.80c. "

For intermediate sizes, the next higher extra to be charged in all cases.

### TEES

1½ x 1½ inches and wider, but under 3 inches, x ½ inch and heavier .....	.20c. extra
1½ x 1½ inches and wider, but under 3 inches, x ⅜ inch .....	.40c. "
1½ x 1½ inches x ½ inch and heavier .....	.40c. "
1½ x 1½ inches x ⅜ inch .....	.50c. "
1 x 1 inch x ⅜ inch .....	.60c. "
1 x 1 inch x ½ inch .....	.70c. "

Prices quoted on application for special sizes.

For intermediate sizes, the next higher extra to be charged in all cases.

### QUANTITY DIFFERENTIALS

All specifications for less than 2,000 pounds of a size will be subject to the following extras, the total weight of a size ordered to determine the extra, regardless of length and regardless of exact quantity actually shipped.

Quantities less than 2,000 pounds, but not less than 1,000 pounds .....	.30c. extra
Quantities less than 1,000 pounds .....	.70c. "



## J. & L. STANDARD CLASSIFICATION OF EXTRAS ON STEEL BARS AND SMALL SHAPES

(Continued)

### EXTRAS FOR CUTTING TO SPECIFIED LENGTHS

Hot Sawing or Shearing to lengths over 24 inches..	.10c. extra
Hot Sawing or Shearing to lengths 12 inches to 24 inches, inclusive.....	.20c. "
Machine Cutting to lengths over 24 inches.....	.20c. "
Machine Cutting to lengths 12 inches to 24 inches, inclusive .....	.40c. "
For Machine Cutting to lengths less than 12 inches extra will be furnished on application, but will not be less than.....	.60c. "

### Exceptions

No charge will be made for Hot Sawing or Shearing to lengths of 5 feet and over.

Shearing or Hot Sawing to lengths under 12 inches will be quoted on application.

Large Rounds and Squares in extreme lengths will be subject to an extra charge.

### MACHINE STRAIGHTENING AND CENTERING

Machine Straightening..... .20c. extra

Extra for Machine Straightening and Centering will be furnished on application.



## J. & L. STANDARD CLASSIFICATION OF EXTRAS ON STEEL TIRE

Extras are given in cents per pound.

1 inch x $\frac{1}{4}$ inch and heavier.....	Base
$1\frac{1}{2}$ inch x $\frac{3}{16}$ and $\frac{7}{32}$ inch.....	.20c. extra
1 inch to $1\frac{7}{16}$ x $\frac{3}{16}$ and $\frac{7}{32}$ inch.....	.30c. "
1 inch to $1\frac{7}{16}$ x $\frac{1}{8}$ inch.....	.50c. "
$\frac{7}{8}$ inch x $\frac{1}{4}$ and $\frac{5}{16}$ inch.....	.30c. "
$\frac{7}{8}$ inch x $\frac{3}{16}$ and $\frac{7}{32}$ inch.....	.50c. "
$\frac{7}{8}$ inch x $\frac{1}{8}$ and $\frac{5}{32}$ inch.....	.60c. "
$\frac{3}{4}$ inch x $\frac{1}{4}$ inch.....	.30c. "
$\frac{3}{4}$ inch x $\frac{3}{16}$ and $\frac{7}{32}$ inch.....	.80c. "
$\frac{3}{4}$ inch x $\frac{1}{8}$ and $\frac{5}{32}$ inch.....	1.00c. "
$\frac{3}{4}$ inch x $\frac{3}{16}$ inch.....	1.00c. "
$\frac{3}{4}$ inch x $\frac{1}{8}$ and $\frac{5}{32}$ inch.....	1.10c. "

For intermediate sizes, the next higher extra to be charged at all times.

Sizes not shown are subject to special arrangement.

### QUANTITY DIFFERENTIALS

All specifications for less than 2,000 pounds of a size will be subject to the following extras, the total weight of a size ordered to determine the extra, regardless of lengths and of exact quantity actually shipped.

Quantities less than 2,000 pounds but not less than 1,000 pounds, .20c. per pound. Quantities less than 1,000 pounds, .60c. per pound.

No extra charge for cutting to tire lengths.

# **J. & L. STANDARD EXTRAS ON SOFT STEEL HOOPS**

Width, Inches	Gauge	Extra, Cents per Pound
1 $\frac{7}{16}$ to 3	13, 14, 15, 16	.10
1 $\frac{7}{16}$ to 2	17, 18 and 19	.15
1 $\frac{7}{16}$ to 2	20	.20
1 $\frac{7}{16}$ to 2	21	.25
1 $\frac{7}{16}$ to 2	22	.35
1 $\frac{1}{8}$ to 1 $\frac{3}{8}$	13, 14 and 15	.15
1 $\frac{1}{8}$ to 1 $\frac{3}{8}$	16, 17 and 18	.20
1 $\frac{1}{8}$ to 1 $\frac{3}{8}$	19 and 20	.25
1 $\frac{1}{8}$ to 1 $\frac{3}{8}$	21	.30
1 $\frac{1}{8}$ to 1 $\frac{3}{8}$	22	.40
1 $\frac{15}{16}$ and 1	13, 14 and 15	.20
1 $\frac{15}{16}$ and 1	16, 17 and 18	.25
1 $\frac{15}{16}$ and 1	19 and 20	.30
1 $\frac{15}{16}$ and 1	21	.35
1 $\frac{15}{16}$ and 1	22	.45
1 $\frac{15}{16}$ and 1	23	.55
1 $\frac{15}{16}$ and 1	24	.65
1 $\frac{7}{8}$	13, 14 and 15	.30
1 $\frac{7}{8}$	16, 17 and 18	.35
1 $\frac{7}{8}$	19 and 20	.40
1 $\frac{7}{8}$	21	.45
1 $\frac{7}{8}$	22	.55
1 $\frac{7}{8}$	23	.65
1 $\frac{7}{8}$	24	.75
2 $\frac{3}{4}$ and 1 $\frac{13}{16}$	13, 14 and 15	.40
2 $\frac{3}{4}$ and 1 $\frac{13}{16}$	16, 17 and 18	.45
2 $\frac{3}{4}$ and 1 $\frac{13}{16}$	19 and 20	.50
2 $\frac{3}{4}$ and 1 $\frac{13}{16}$	21	.55
2 $\frac{3}{4}$ and 1 $\frac{13}{16}$	22	.60
2 $\frac{3}{4}$ and 1 $\frac{13}{16}$	23	.70
2 $\frac{3}{4}$ and 1 $\frac{13}{16}$	24	.80
1 $\frac{11}{16}$	13, 14 and 15	.45
1 $\frac{11}{16}$	16, 17 and 18	.50
1 $\frac{11}{16}$	19 and 20	.60
1 $\frac{11}{16}$	21	.70
1 $\frac{11}{16}$	22	.80
1 $\frac{11}{16}$	23	.90
1 $\frac{11}{16}$	24	1.00
1 $\frac{5}{8}$	13, 14 and 15	.50
1 $\frac{5}{8}$	16, 17 and 18	.55
1 $\frac{5}{8}$	19 and 20	.65
1 $\frac{5}{8}$	21	.75

For sizes manufactured by Jones & Laughlin Steel Company, see page 135.

# **J. & L. STANDARD EXTRAS ON SOFT STEEL HOOPS**

(Continued)

Width, Inches	Gauge	Extra, Cents per Pound
$\frac{3}{8}$	22	.85
$\frac{3}{8}$	23	.95
$\frac{3}{8}$	24	1.05
$\frac{9}{16}$	13, 14 and 15	.55
$\frac{9}{16}$	16, 17 and 18	.60
$\frac{9}{16}$	19 and 20	.70
$\frac{9}{16}$	21	.80
$\frac{9}{16}$	22	.90
$\frac{9}{16}$	23	1.00
$\frac{1}{2}$	13, 14 and 15	.65
$\frac{1}{2}$	16, 17 and 18	.70
$\frac{1}{2}$	19 and 20	.80
$\frac{1}{2}$	21	.90
$\frac{1}{2}$	22	1.00
$\frac{1}{2}$	23	1.10
$\frac{7}{8}$	13, 14 and 15	.90
$\frac{7}{8}$	16, 17 and 18	1.00
$\frac{7}{8}$	19 and 20	1.10
$\frac{7}{8}$	21	1.20
$\frac{3}{4}$	13, 14 and 15	1.10
$\frac{3}{4}$	16, 17 and 18	1.20
$\frac{3}{4}$	19 and 20	1.30

## **ADDITIONAL EXTRAS**

For cutting Hoops and Bands to specified lengths not less than 2 feet .....	.05c. per lb.
For cutting Hoops and Bands less than 2 feet....	.20c. "
For rounding one end of Cut Hoops .....	.05c. "
For rounding both ends of Cut Hoops .....	.10c. "
For each gauge lighter than included on list.....	.10c. "

For intermediate gauges, the extra for next lighter gauge will be charged.

## **EXEMPTION**

Extras for cutting and rounding one end will be waived on Cut Hoops  $1\frac{1}{4}$  to 3 inches wide, inclusive, when ordered in car load lots for cooperage purposes.

**J. & L. STANDARD EXTRAS ON PLATE STEEL**

Extras are given in cents per pound.

Rectangular Plates $\frac{1}{4}$ inch on edges and thicker, over 6 inches wide and up to 100 inches wide .....	Base
Gauges lighter than $\frac{1}{4}$ inch to and including $\frac{3}{16}$ inch Plates on thin edges .....	.10c. extra
Gauges No. 7 and No. 8 .....	.15c. "
" Nos. 9, 10 and 11 .....	.25c. "
Plates over 100 inches to 110 inches .....	.05c. "
" " 110 " " 115 " .....	.10c. "
" " 115 " " 120 " .....	.15c. "
" " 120 " " 125 " .....	.25c. "
" " 125 " " 130 " .....	.50c. "
" " 130 " .....	1.00c. "
All Sketches (excepting straight taper Plates, vary- ing not more than 4 inches in width at ends, narrowest end being not less than 30 inches)	.10c. "
Complete Circles .....	.20c. "
Boiler and Flange Steel Plates .....	.10c. "
"A. B. M. A." and ordinary Fire-box Steel Plates .....	.20c. "
Still Bottom Steel .....	.30c. "
Marine Steel .....	.40c. "
Locomotive Fire-box Steel .....	.50c. "
Less than carload lots .....	.05c. "
Shell grade of steel is abandoned.	



## MANUFACTURERS' STANDARD SPECIFICATIONS

Standard specifications governing the chemical and physical properties of structural and special open-hearth plate and rivet steel, as adopted by the Association of American Steel Manufacturers.—Revised February 6, 1903.

### STRUCTURAL STEEL

#### PROCESS OF MANUFACTURE

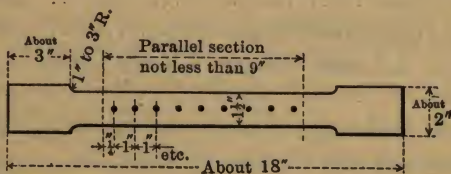
1. Steel may be made by either the open-hearth or Bessemer process.

#### TESTING AND INSPECTION

2. All tests and inspections shall be made at the place of manufacture prior to shipment.

#### TEST PIECES

3. The tensile strength, limit of elasticity and ductility shall be determined from a standard test piece cut from the finished material. The standard shape of the test piece for sheared plates shall be as shown by the following sketch:



Piece to be of same thickness as the plate

On tests cut from other material the test piece may be either the same as for sheared plates or it may be planed or turned parallel throughout its entire length, and in all cases where possible two opposite sides of the test piece shall be the rolled



surfaces. The elongation shall be measured on an original length of 8 inches, except as modified in section 12, paragraph c. Rivet rounds and small bars shall be tested of full size as rolled.

Two test pieces shall be taken from each melt or blow of finished material, one for tension and one for bending; but in case either test develops flaws, or the tensile test piece breaks outside of the middle third of its gauged length, it may be discarded and another test piece substituted therefor.

### **ANNEALED TEST PIECES**

4. Material which is to be used without annealing or further treatment shall be tested in the condition in which it comes from the rolls. When material is to be annealed or otherwise treated before use, the specimen representing such material shall be similarly treated before testing.

### **MARKING**

5. Every finished piece of steel shall be stamped with the blow or melt number, and steel for pins shall have the blow or melt number stamped on the ends. Rivet and lacing steel, and small pieces for pin plates and stiffeners, may be shipped in bundles securely wired together, with the blow or melt number on a metal tag attached.

### **FINISH**

6. Finished bars shall be free from injurious seams, flaws or cracks, and have a workmanlike finish.

### **CHEMICAL PROPERTIES**

7a. Steel for buildings, train sheds, highway bridges and similar structures, maximum phosphorus .10 per cent.

7b. Steel for railway bridges, maximum phosphorus .08 per cent.

### **PHYSICAL PROPERTIES**

8. Structural steel shall be of three grades, Rivet, Railway Bridge, and Medium.

**RIVET STEEL**

9. Ultimate strength, 48,000 to 58,000 pounds per square inch. Elastic limit, not less than one-half the ultimate strength.

Percentage of elongation,  $\frac{1,400,000}{\text{ultimate strength}}$

Bending test, 180 degrees flat on itself, without fracture on outside of bent portion.

**STEEL FOR RAILWAY BRIDGES**

10. Ultimate strength, 55,000 to 65,000 pounds per square inch. Elastic limit, not less than one-half the ultimate strength.

Percentage of elongation,  $\frac{1,400,000}{\text{ultimate strength}}$

Bending test, 180 degrees to a diameter equal to thickness of piece tested, without fracture on outside of bent portion.

**MEDIUM STEEL**

11. Ultimate strength, 60,000 to 70,000 pounds per square inch. Elastic limit, not less than one-half the ultimate strength.

Percentage of elongation,  $\frac{1,400,000}{\text{ultimate strength}}$

Bending test, 180 degrees to a diameter equal to thickness of piece tested, without fracture on outside of bent portion.

**MODIFICATIONS IN ELONGATION FOR THIN AND THICK MATERIAL**

12. For material less than  $\frac{5}{16}$ -inch and more than  $\frac{1}{4}$ -inch in thickness, the following modifications shall be made in the requirements for elongation:

a. For each increase of  $\frac{1}{8}$ -inch in thickness above  $\frac{1}{4}$ -inch, a deduction of 1 per cent shall be made from the specified elongation, except that the minimum elongation shall be 20 per cent for eye-bar material and 18 per cent for other structural material.

b. For each decrease of  $\frac{1}{16}$ -inch in thickness below  $\frac{5}{16}$ -inch, a deduction of  $2\frac{1}{2}$  per cent shall be made from the specified elongation.

c. In rounds of  $\frac{1}{2}$ -inch or less in diameter, the elongation shall be measured in a length equal to eight times the diameter of section tested.

d. For pins made from any of the before-mentioned grades of steel, the required elongation shall be 5 per cent less than that specified for each grade, as determined on a test piece, the center of which shall be 1 inch from the surface of the bar.

### VARIATION IN WEIGHT

13. The variation in cross-section or weight of more than  $2\frac{1}{2}$  per cent from that specified will be sufficient cause for rejection, except in the case of sheared plates, which will be covered by the following permissible variations:

a. Plates  $12\frac{1}{2}$  pounds per square foot or heavier, up to 100 inches wide, when ordered to weight, shall not average more than  $2\frac{1}{2}$  per cent variation above or  $2\frac{1}{2}$  per cent below the theoretical weight. When 100 inches wide and over, 5 per cent above or 5 per cent below the theoretical weight.

b. Plates under  $12\frac{1}{2}$  pounds per square foot, when ordered to weight, shall not average a greater variation than the following:

Up to 75 inches wide,  $2\frac{1}{2}$  per cent above or  $2\frac{1}{2}$  per cent below the theoretical weight. 75 inches wide up to 100 inches wide, 5 per cent above or 3 per cent below the theoretical weight. When 100 inches wide and over, 10 per cent above or 3 per cent below the theoretical weight.

c. For all plates ordered to gauge there will be permitted an average excess of weight over that corresponding to the dimensions on the order equal in amount to that specified in the following table:

### TABLE OF ALLOWANCES FOR OVERWEIGHT FOR RECTANGULAR PLATES WHEN ORDERED TO GAUGE

Plates will be considered up to gauge if measuring not over  $\frac{1}{16}$  inch less than the ordered gauge.

#### PLATES $\frac{1}{4}$ INCH AND OVER IN THICKNESS

Thickness of Plate, Inch	WIDTH OF PLATE			
	Up to 75 Inches, Per Cent	75 Inches to 100 Inches, Per Cent	Over 100 to 115 Inches, Per Cent	Over 115 Inches, Per Cent
$\frac{1}{4}$	10	14	18	..
$\frac{5}{16}$	8	12	16	..
$\frac{3}{8}$	7	10	13	17
$\frac{7}{16}$	6	8	10	13
$\frac{1}{2}$	5	7	9	12
$\frac{9}{16}$	4 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{2}$	11
$\frac{5}{8}$	4	6	8	10
Over $\frac{3}{4}$	3 $\frac{1}{2}$	5	6 $\frac{1}{2}$	9

#### PLATES UNDER $\frac{1}{4}$ INCH IN THICKNESS

Thickness of Plate, Inch	WIDTH OF PLATE		
	Up to 50 Inches, Per Cent	50 Inches to 70 Inches, Per Cent	Over 70 Inches, Per Cent
$\frac{1}{8}$ up to $\frac{5}{32}$	10	15	20
$\frac{5}{32}$ up to $\frac{3}{16}$	8 $\frac{1}{2}$	12 $\frac{1}{2}$	17
$\frac{3}{16}$ up to $\frac{1}{4}$	7	10	15

NOTE.—The weight of 1 cubic inch of rolled steel is assumed to be 0.2833 pound,

#### STRUCTURAL CAST-IRON

1. Except when chilled iron is specified, all castings shall be tough gray iron, free from injurious cold-shuts or blow-holes, true to pattern, and of a workmanlike finish. Sample pieces one inch square, cast from the same heat of metal in sand molds, shall be capable of sustaining on a clear span of 4 feet 8 inches a central load of 500 pounds when tested in the rough bar.



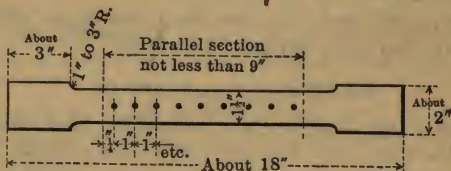
## SPECIAL OPEN-HEARTH PLATE AND RIVET STEEL

### TESTING AND INSPECTION

1. All tests and inspections shall be made at the place of manufacture prior to shipment.

#### TEST PIECES

2. The tensile strength, limit of elasticity and ductility shall be determined from a standard test piece cut from the finished material. The standard shape of the test piece for sheared plates shall be as shown by the following sketch:



Piece to be of same thickness as the plate

On tests cut from other material the test piece may be either the same as for sheared plates, or it may be planed or turned parallel throughout its entire length, and in all cases where possible two opposite sides of the test piece shall be the rolled surfaces. The elongation shall be measured on an original length of 8 inches, except as modified in section 12, paragraph c. Rivet rounds and small bars shall be tested of full size as rolled. Four test pieces shall be taken from each melt of finished material, two for tension and two for bending; but in case either test develops flaws, or the tensile test piece breaks outside of the middle third of its gauged length, it may be discarded and another test piece substituted therefor.

#### ANNEALED TEST PIECES

3. Material which is to be used without annealing or further treatment shall be tested in the condition in which it comes from the rolls. When material is to be annealed or otherwise treated before use, the specimen representing such material shall be similarly treated before testing.



### MARKING

4. Every finished piece of steel shall be stamped with the melt number. Rivet steel may be shipped in bundles securely wired together, with the melt number on a metal tag attached.

### FINISH

5. All plates shall be free from injurious surface defects and have a workmanlike finish.

### CHEMICAL PROPERTIES

6a. Flange or Boiler Steel, maximum phosphorus .06 per cent, maximum sulphur .04 per cent.

6b. Extra Soft and Fire Box Steel, maximum phosphorus .04 per cent, maximum sulphur .04 per cent.

### PHYSICAL PROPERTIES

7. Special Open-hearth Plate and Rivet Steel shall be of three grades, *Extra Soft*, *Fire Box* and *Flange or Boiler Steel*.

### EXTRA SOFT STEEL

8. Ultimate strength, 45,000 to 55,000 pounds per square inch. Elastic limit, not less than one-half the ultimate strength. Elongation, 28 per cent. Cold and quench bends, 180 degrees flat on itself, without fracture on outside of bent portion.

### FIRE BOX STEEL

9. Ultimate strength, 52,000 to 62,000 pounds per square inch. Elastic limit, not less than one-half the ultimate strength. Elongation, 26 per cent. Cold and quench bends, 180 degrees flat on itself, without fracture on outside of bent portion.

### FLANGE OR BOILER STEEL

10. Ultimate strength, 55,000 to 65,000 pounds per square inch. Elastic limit, not less than one-half the ultimate strength. Elongation, 25 per cent. Cold and quench bends, 180 degrees flat on itself, without fracture on outside of bent portion.

### BOILER RIVET STEEL

11. Steel for boiler rivets shall be made of the extra soft grade specified in paragraph No. 8.

### MODIFICATIONS IN ELONGATION FOR THIN AND THICK MATERIAL

12. For material less than  $\frac{5}{16}$  inch and more than  $\frac{1}{4}$  inch in thickness, the following modifications shall be made in the requirements for elongation:

a. For each increase of  $\frac{1}{8}$  inch in thickness above  $\frac{1}{4}$  inch, a deduction of 1 per cent shall be made from the specified elongation.

b. For each decrease of  $\frac{1}{16}$  inch in thickness below  $\frac{5}{16}$  inch, a deduction of  $2\frac{1}{2}$  per cent shall be made from the specified elongation.

c. In rounds of  $\frac{1}{2}$  inch or less in diameter, the elongation shall be measured in a length equal to eight times the diameter of section tested.

### VARIATION IN WEIGHT

13. The variation in cross-section or weight of more than  $2\frac{1}{2}$  per cent from that specified will be sufficient cause for rejection, except in the case of sheared plates, which will be covered by the following permissible variations:

a. Plates  $12\frac{1}{2}$  pounds per square foot or heavier, up to 100 inches wide, when ordered to weight, shall not average more than  $2\frac{1}{2}$  per cent variation above or  $2\frac{1}{2}$  per cent below the theoretical weight. When 100 inches wide and over, 5 per cent above or 5 per cent below the theoretical weight.

b. Plates under  $12\frac{1}{2}$  pounds per square foot, when ordered to weight, shall not average a greater variation than the following:

Up to 75 inches wide,  $2\frac{1}{2}$  per cent above or  $2\frac{1}{2}$  per cent below the theoretical weight; 75 inches wide up to 100 inches wide, 5 per cent above or 3 per cent below the theoretical weight. When 100 inches wide and over, 10 per cent above or 3 per cent below the theoretical weight.

c. For all plates ordered to gauge there will be permitted an average excess of weight over that corresponding to the dimensions on the order equal in amount to that specified in the following table:

**TABLE OF ALLOWANCES FOR OVERWEIGHT FOR RECTANGULAR PLATES WHEN ORDERED TO GAUGE**

Plates will be considered up to gauge if measuring not over  $\frac{1}{100}$  inch less than the ordered gauge.

**PLATES  $\frac{1}{4}$  INCH AND OVER IN THICKNESS**

Thickness of Plate, Inches	WIDTH OF PLATE			
	Up to 75 Inches, Per Cent	75 Inches to 100 Inches, Per Cent	Over 100 to 115 Inches, Per Cent	Over 115 Inches, Per Cent
$\frac{1}{4}$	10	14	18	..
$\frac{5}{16}$	8	12	16	..
$\frac{3}{8}$	7	10	13	17
$\frac{7}{16}$	6	8	10	13
$\frac{1}{2}$	5	7	9	12
$\frac{9}{16}$	4 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{2}$	11
$\frac{5}{8}$	4	6	8	10
Over $\frac{5}{8}$	3 $\frac{1}{2}$	5	6 $\frac{1}{2}$	9

**PLATES UNDER  $\frac{1}{4}$  INCH IN THICKNESS**

Thickness of Plate, Inches	WIDTH OF PLATE		
	Up to 50 Inches, Per Cent	50 Inches to 70 Inches, Per Cent	Over 70 Inches, Per Cent
$\frac{1}{8}$ up to $\frac{5}{32}$	10	15	20
$\frac{5}{32}$ up to $\frac{3}{16}$	8 $\frac{1}{2}$	12 $\frac{1}{2}$	17
$\frac{3}{16}$ up to $\frac{1}{4}$	7	10	15

NOTE:—The weight of 1 cubic inch of rolled steel is assumed to be 0.2833 pound.

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" sharp ovals . . . . .	160
" sheet piling . . . . .	95, 96
" " steel . . . . .	115
" special half ovals . . . . .	86
" square bars . . . . .	147-152
" steel rails and connections . . . . .	97-104
" " sheet piling . . . . .	95, 96
" tank steel . . . . .	115
" " stiffener . . . . .	92
" tees, with equal legs . . . . .	61
" " " unequal legs . . . . .	64
" U-bars . . . . .	92
" wagon box bevel edge . . . . .	82
" wearing plates . . . . .	68
" Z-bars, harvester, cold rolled . . . . .	66
" " " hot rolled . . . . .	66
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Z-BARS . . . . .	diagrams of harvester, cold rolled . . . . .	65
	" hot rolled . . . . .	65
	dimensions of harvester, cold rolled . . . . .	66
	" hot rolled . . . . .	66
	weights of harvester, cold rolled . . . . .	66
	" hot rolled . . . . .	66





